BANGALORE DEVELOPMENT AUTHORITY

INVITATION FOR REQUEST FOR PROPOSAL (RFP)

FOR

"Design, Development, and Implementation of End-to-End E-Auction Management System with Real-Time Bidding Engine, Fraud Detection, Integrated Payment & Refund Management, and Tamper-Proof Audit Framework for Bangalore Development Authority (BDA)"

First Electronic Document (Technical Proposal)

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DISCLAIMER

The information contained in this Tender Document or subsequently provided to Bidder(s), whether verbally or in documentary or any other form by or on behalf of the BDA or any of their employees or advisors, is provided to The Bidder(s) on the terms and conditions set out in this Tender Document and such other terms and conditions subject to which such information is provided.

This Tender document is not a Contract and is neither an offer nor an invitation by the BDA to the prospective Bidders or any other person. The purpose of this Tender Document is to provide interested parties with information that may be useful to them in preparing their technical proposals and financial offers pursuant to this Tender Document (the "**Proposal**"). This Tender Document includes statements, which reflect various assumptions and assessments arrived at by the BDA in relation to the Assignment. Such assumptions, assessments and statements do not purport to contain all the information that each Bidder may require. This Tender Document may not be appropriate for all people, and it is not possible for the BDA, its employees or advisors to consider the investment objectives, financial situation and needs of each party who reads or uses this Tender Document. The assumptions, assessments, statements and information contained in this Tender Document may not be complete, accurate, adequate or correct. Each Bidder should, therefore, conduct its own investigations and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments, statements and information contained in this Tender Document and obtain independent advice from appropriate sources.

Information provided in this Tender Document to the Bidder(s) is on a wide range of matters, some of which depends upon interpretation of law. The information given is not an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. The BDA accepts no responsibility for the accuracy or otherwise for any interpretation or opinion on law expressed herein.

The BDA, its employees and advisors make no representation or warranty and shall have no liability to any person, including any Bidder or Bidder under any law, statute, rules or regulations or tort, principles of restitution or unjust enrichment or otherwise for any loss, damages, cost or expense which may arise from or be incurred or suffered on account of anything contained in this Tender Document or otherwise, including the accuracy, adequacy, correctness, completeness or reliability of the Tender Document and any assessment, assumption, statement or information contained therein or deemed to form part of this Tender Document or arising in any way in this Bid Stage.

The BDA also accepts no liability of any nature whether resulting from negligence or otherwise howsoever caused arising from reliance of any Bidder upon the statements contained in this Tender Document. The BDA may in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information, assessment or assumptions contained in this Tender Document.

The issue of this Tender Document does not imply that the BDA is bound to select a Service Provider or to appoint the Selected Service Provider or Service Provider for the Event and the BDA reserves the right to reject all or any of the Bidders or Proposals without assigning any reason whatsoever.

The Bidder shall bear all its costs associated with or relating to the preparation and submission of its Proposal including but not limited to preparation, copying, postage, delivery fees, expenses associated with any demonstrations or presentations which may be required by the BDA, or any other costs incurred in connection with or relating to its Proposal. All such costs and expenses will remain with the Bidder and the BDA shall not be liable in any manner whatsoever for the same or for any other costs or other expenses incurred by a Bidder in preparation or submission of the Proposal, regardless of the conduct or outcome of the Bidding Process.

Contents of the Tender Document.

This Tender Document comprises the Disclaimer set forth hereinabove, the contents as listed below and will additionally include any Addenda issued.

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SECTION – 1: INTRODUCTION

1.1. BACKGROUND

The Bangalore Development Authority (BDA) is a statutory body established under the BDA Act, 1976, responsible for the planned development of Bangalore, creation of quality infrastructure, provision of sites and services, and catering to the housing needs of citizens. Since its inception, BDA has allotted over 76,000 sites to individuals and more than 800 civic amenity (CA) sites to public utilities. BDA's mandate encompasses urban planning, land acquisition, infrastructure development, housing, property allotment (including CA sites, residential/commercial sites, and built-up flats), and regulatory enforcement across its jurisdiction.

As part of its mandate, BDA periodically disposes of and allots properties — including CA sites, residential plots, commercial plots, built-up flats, and other immovable assets — through a competitive auction process. The e-Auction mechanism is a critical instrument for ensuring transparency, fair competition, and revenue maximisation in the disposal of public assets.

1.2. Objective of this RFP

The objective of this Request for Proposal (RFP) is to select a qualified IT Service Provider for the design, development, testing, deployment, and maintenance of a comprehensive, end-to-end E-Auction Management System (AMS) for the Bangalore Development Authority (BDA). The proposed system must:

a) Provide a standardised, transparent, and legally defensible auction process for the disposal and allotment of BDA properties.

b) Support the complete auction lifecycle from auction creation, configuration, approval, and publication through bidder registration, participation, evaluation, live bidding, monitoring, and control to award finalization, payment processing, and EMD refund management.

c) Enable configuration-driven flexibility to accommodate Forward (highest-bid-wins) and Reverse (lowest-bid-wins) auction types with Direct, Prequalified, and Restricted bid models, configurable without code changes.

d) Implement a verified, server-synchronised live bidding engine with correct delta time auto-extension, configurable bid thresholds (floor/ceiling), complete bidder identity masking, concurrency control, and mobile-responsive access.

e) Provide real-time auction monitoring dashboards with controlled Force Close (mandatory approval workflow), bid tracking, fraud detection, and comprehensive alerting for authorised BDA officials.

f) Incorporate tamper-proof, legally timestamped, and immutable audit logging with cryptographic integrity verification for all user and system actions.

g) Integrate with external systems including payment gateways, notification gateways

(Email/SMS), Digital Signature Certificate (DSC) providers, KYC/PAN verification APIs, BDA's Layout Information System, bank reconciliation APIs, and authoritative NTP time sources.

h) Implement comprehensive fraud detection and anti-collusion controls including IP tracking, device fingerprinting, bid pattern analysis, rate limiting, and bot protection.

i) Support weighted scoring-based evaluation for Prequalified auctions with Technical, Financial, and Combined evaluation logic, and multi-evaluator conflict resolution.

j) Provide bulk auction management for batch creation, approval, and publication of multiple properties from same or multiple layouts.

k) Ensure compliance with Indian data protection regulations (DPDP Act, 2023), the Information Technology Act, 2000, the Indian Evidence Act, 1872 (Section 65B), and applicable Government of Karnataka IT policies and procurement norms.

l) Implement a multi-tenancy architecture enabling other Government organisations to use the system if required by BDA.

m) Provide a robust legal framework covering bid irrevocability, dispute resolution, payment dispute handling with escalation SLAs, and evidentiary validity of electronic records.

n) Deliver role-specific training, comprehensive documentation, and warranty support with defined SLAs and penalty clauses.

In view of the above, Bangalore Development Authority (BDA) intends to engage an IT Service Provider for design, development, and implementation of the E-Auction Management System. It is proposed to select the Service Provider through a transparent process by way of e-procurement mode through https://kppp.karnataka.gov.in.

The selected Service Provider shall be responsible for carrying out the Project through its completion, including deployment on BDA-specified infrastructure (Government SDC or BDA servers), warranty support, and handover of all source code, documentation, and intellectual property to BDA.

1.3. Scope of Work

All features described herein are explicit and mandatory. The detailed scope of services is available in **Section 6** of this Tender Document

1.4. General Terms and Conditions

The statements and explanations contained in this Tender Document are intended to provide a proper understanding to the Bidders about the subject matter of this Tender Document and should not be construed or interpreted as limiting in any way or manner the scope of services and obligations of Bidder set forth in the Service Contract or the BDA's rights to amend, alter, change, supplement or clarify the scope of work, pursuant to this Tender Document or the terms thereof or herein contained.

The BDA shall receive Proposals pursuant to this Tender Document in accordance with the terms set forth in this Tender Document and other documents to be provided by the BDA

pursuant to this Tender Document (collectively the "**Bidding/Proposal Documents**"), as modified, altered, amended, and clarified from time to time by the BDA, and all Proposals shall be prepared and submitted in accordance with such terms.

1.5. Eligibility Criteria

The Bidder's eligibility shall be established by meeting all of the following mandatory criteria. Failure to meet any criterion shall result in disqualification of the Bidder.

Sl.	Criterion	Requirement	Supporting Document
1	**Legal Entity & Registration**	The Bidder shall be a Company registered under the Companies Act, 1956/2013, or a Partnership Firm registered under the Indian Partnership Act, 1932, or an LLP registered under the Limited Liability Partnership Act, 2008, in existence for at least 5 (five) years as on the Proposal Due Date.	Copy of Certificate of Incorporation / Registration Certificate, GST Registration Certificate, and PAN Card.
2	**Relevant Experience – E-Auction / E-Procurement Systems**	The Bidder must have successfully completed a minimum of one (1) project involving design, development, and implementation of e-Auction, e-Procurement, or online bidding/trading platforms for Central or State Government Departments, Public Sector Undertakings (PSUs), Boards, Corporations, or Urban Local Bodies in India.	Work Orders / Letters of Award / Agreements / Completion Certificates for each claimed project.
3	**Relevant Experience – Government IT Projects in Karnataka**	The Bidder must have successfully completed a minimum of two (2) turnkey IT projects (web application / portal / enterprise system) for Central or State Government Departments, PSUs, Boards, or Corporations within the State of Karnataka.	Work Orders / Letters of Award / Agreements / Completion Certificates.
4	**Average Annual Turnover**	The Bidder shall have an average annual turnover of at least Rs. 10.00 Crores (Rupees Ten Crores) during the last three financial years (FY 2022–23, FY 2023–24, and FY 2024–25).	CA-certified financial statements / Audited Balance Sheets for each year, and certificate as per Annexure-2 of Appendix-I.
5	**Positive Net Worth**	The Bidder shall have a positive net worth as on 31 March 2025 for each of the financial years FY 2022–23, FY 2023–24, and FY 2024–25.	CA-certified Net Worth Certificate as per Annexure-2 of Appendix-I.
6	**ISO 9001 Certification**	The Bidder shall hold a valid ISO 9001 Quality Management System certification issued by an accredited Certification Body (CB), valid as on the Proposal Due Date.	Copy of valid ISO 9001 certificate.
7	**ISO 27001 Certification**	The Bidder shall hold a valid ISO 27001 Information Security Management System (ISMS) certification issued by an accredited CB, valid as on the Proposal Due Date.	Copy of valid ISO 27001 certificate.
8	**CMMI Level 3 or Above**	The Bidder shall possess a valid Capability Maturity Model Integration (CMMI) Level 3 or above appraisal certificate issued by a CMMI Institute licensed by ISACA.	Copy of valid CMMI appraisal certificate.
9	**IT Manpower**	The Bidder shall have a minimum of 50 (fifty) full-	Self-declaration on company

Sl.	Criterion	Requirement	Supporting Document
	Strength	time IT professionals on its direct payroll, including software developers, QA engineers, database specialists, solution architects, project managers, UI/UX designers, DevOps engineers, and security specialists. At least 25 of these professionals shall be based in Karnataka.	letterhead with list of employees, supported by EPF/ESIC records or HR certification.
10	**No Blacklisting**	The Bidder shall not have been blacklisted, suspended, or debarred by any Central or State Government, Semi-Government body, or Public Sector Undertaking in India at any time during the past 5 (five) years. Neither the firm nor any of its Directors/Partners shall have been convicted of any criminal offence involving compromise of citizen data or financial fraud.	Self-declaration on company letterhead, signed by authorised signatory, on non-judicial stamp paper of appropriate value.
11	**Payment Gateway Integration Experience**	The Bidder must have experience in integrating with at least one (1) payment gateway (e.g., SBI ePay, Razorpay, PayU, BillDesk, or equivalent) in a Government or enterprise project with successful transaction processing.	Work Order / Agreement or client certificate confirming payment gateway integration.

1.6. General Conditions

i) The Bidder must have or establish an office in Bengaluru.

ii) The Bidder shall be a single organisation. Consortium or subcontracting is not permitted.

iii) The Service Provider shall deploy at least two (2) full-time software professionals on-site at BDA premises for the entire implementation period and the post-implementation warranty support period. At least one of these professionals shall be a Senior Developer / Technical Lead with a minimum of 5 years of experience in real-time web application development.

iv) The Service Provider shall ensure that all key personnel proposed in the Technical Proposal are available for the duration of the project. Any substitution of key personnel shall require prior written approval from BDA and the substitute shall possess equivalent or superior qualifications and experience.

v) The Service Provider shall comply with all applicable Government of Karnataka IT policies, data protection regulations, and security guidelines throughout the project lifecycle.

Note: Supporting documents shall be provided as indicated in Annexure-1 and Annexure-2 of Appendix-I in proof of the above eligibility criteria.

1.7. Bidding Process

1.7.1. The BDA invites eligible Bidders to submit their Proposals for the Project electronically in the unified e-procurement platform of the Government of Karnataka (https://kppp.karnataka.gov.in). The BDA has adopted a two stage

two cover system for selection of the Service Provider for the Project.

1.7.2. The selection shall be on Techno-commercial based Selection (with evaluation based on Techno-commercial formula 75% weightage for technical evaluation score and 25% weightage for commercial score).

1.7.3. The Bidders are requested to submit their Proposals in accordance with the Bidding/Proposal Documents. The Proposal shall be valid for a period of **30 days** from the last date specified in **Clause-1.3** for submission of Proposals (the "**Proposal Due Date**").

1.7.4. The Bidding /Proposal Documents include the draft Service Contract for the Project. The Bidding/Proposal Documents and any addenda issued subsequent to this Tender Document, but before the Proposal Due Date, will be deemed to be part of the Bidding/Proposal Documents.

1.7.5. During this Bid Stage, bidders are required to carry out, at their cost, such studies as may be required for submitting their respective Proposals for award of the Project.

1.7.6. (i) **Technical Proposal** - Bidders would need to submit the information as per the standard formats given in **Appendix – I.**

(ii) "**Financial Proposal**" is to be entered only through e-procurement platform. [The specimen provided in **Appendix–IV** is only for reference].

1.7.7. The evaluation of the Proposals submitted would be carried out in the following stages:

a) **The First stage -** the information provided by the Bidders relating to their eligibility criteria comprising Technical Capacity and Financial Capacity would be evaluated. Only bidders who meet the Eligibility Criteria would be considered for the evaluation of Technical Proposal.

b) **In the second stage -** the Technical Proposal of the Bidders, who qualify eligibility criteria, would be evaluated. It also includes the presentation of the solution offered through PPT and evaluated as specified in **Section-3** of the Tender Document. The bidders shall demonstrate (Proof of Concept) how their solutions are going to make foolproof software. Different time slots will be allotted to each bidder for presentation. The bidder shall exhibit new technologies which they are going to incorporate in the software.

c) **In the third stage -** The Bidders who have qualified in technical evaluation, the financial bids/proposals of those Bidder only will be opened and evaluated. The Client shall simultaneously notify the Bidders that have secured the minimum qualifying mark, indicating the date and time set for opening the Financial Proposals. The notification may be sent by registered letter, cable, telex, facsimile, or electronic mail. The Financial Proposals shall be opened

publicly in the presence of the Bidders' representatives who choose to attend. The name of the Bidder, the quality scores, and the proposed prices shall be read aloud and recorded when the Financial Proposals are opened. The Client shall prepare minutes of the public opening. The Final selection is done based on the combined scores of both technical and financial evaluations. This is called as **"Techno-Commercial Score".**

1.7.8. Any queries or request for additional information concerning this Tender Document shall be submitted in writing or by e-mail to the designated officer specified in **Clause-2.9.3.**

1.8. Schedule of Bidding Process

All bidders must check and adhere to the schedule as mentioned in the E-Procurement portal and tender document.

Sl. No.	Event Description	Date
1	Publication of Tender Document in the e-portal.	As per eProcurement portal
2	Last date for receipt of Pre-Bid Queries.	As per eProcurement portal
3	Pre-Bid meeting/conference Responses /Answers to the queries submitted over mail and via corrigendum.	As per eProcurement portal
4	Proposal Due Date for e-tender submission	As per eProcurement portal
5	Opening of Technical Proposals at the office of BDA and technical based evaluation by the BDA.	As per eProcurement portal
6	Date for Demonstration of proof of concept (POC) by the eligible Bidders as part of Technical Evaluation at BDA office or as decided by the BDA. Scoring for technical evaluation including POC. Maximum time allowed for demonstration by each bidder is One Hour.	As per eProcurement portal
7	Opening of Financial Proposal of the Bidder qualified in technical evaluation & POC.	As per eProcurement portal

Any changes in the schedule or modifications / revisions pertaining to the Tender will be intimated only through e-procurement portal and not notified in the Newspapers.

SECTION-2: INSTRUCTIONS TO BIDDERS

A. GENERAL

2.1. General terms of Bidding

2.1.1. The bidder shall be a legal entity as per the Eligibility Criteria as defined in Clause 1.5 &1.6.

2.1.2. Unless the context otherwise requires, the terms not defined in this Tender Document, but defined in the draft Service Contract for the Project (the **"Service Contract"**) shall have the meaning assigned thereto in the Service Contract.

2.1.3. Notwithstanding anything to the contrary contained in this Tender Document, the detailed terms specified in the draft Service Contract shall have overriding effect, provided, however, that any conditions or obligations imposed on the Service Provider hereunder shall continue to have effect in addition to its obligations under the Service Contract.

2.1.4. The Financial Proposal should be furnished in electronic mode only, which shall also be filled up by the Bidder in the format made available on the e- Procurement platform. The Financial Proposal shall clearly indicate the bid amount in both figures and words, in Indian Rupees. In the event of any difference between figures and words, the amount in words shall be taken into account. The Financial Proposal shall be quoted as a fixed amount of " lump-sum project cost".

2.1.5. The Bidder shall pay an EMD of Rs. 2,00,000/- (Rupees Two Lakh only) through any of the four modes of e-Payment as specified in the e- procurement portal. The proposal shall be summarily rejected in e-portal if EMD is not paid. The EMD shall be refundable not later than 15 (Fifteen) days after completion of selection process, except in case of the Selected Service Provider whose EMD shall be retained till he has provided a Performance Security under the Service Contract.

2.1.6. The Bidder should submit a Power of Attorney as per the format at Appendix–II, authorizing the signatory of the Proposal to commit the Bidder.

2.1.7. Any proposals submitted with conditions/stipulations are liable to rejection as a non-responsive Proposal submission.

2.1.8. The Proposal submission and all related correspondence and documents in relation to the Bidding/proposal Documents shall be in English language. Supporting documents and printed literature furnished by the Bidder with the Proposal may be in any other language if they are accompanied by appropriate translations of the pertinent passages in the English language, duly authenticated and certified by the Bidder. Supporting materials, which are not translated into English, may not be considered. For interpretation and evaluation of the Proposal, the English language translation shall prevail.

2.1.9. The Bidding/Proposal Documents including this Tender Document and all attached documents are and shall remain the property of the BDA and are transmitted to the Bidders solely for preparation and the submission of a Proposal in accordance herewith. IT Consultancy are to treat all information as strictly confidential and shall not use it for any purpose other than for

preparation and submission of their Proposal. The BDA will not return any Proposal, or any information provided along therewith.

2.1.10. Any entity which has been barred by the Central/ State Government, or any entity controlled by them, from participating in any Project / assignment and the bar subsists as on the date of Proposal, would not be eligible to submit a Proposal. A Bidder must not have been blacklisted in the past 3 years from any Government or Semi Government organizations for the breach of contractual obligations/material breach.

2.1.11. The following conditions shall be adhered to while submitting a Proposal:

a) Bidders should attach clearly marked and referenced continuation sheets if the space provided in the prescribed forms in the Annexes is insufficient. Alternatively, Bidders may format the prescribed forms making do provision for incorporation of the requested information.

b) Information supplied by a Bidder must apply to the Bidders named in the Proposal.

c) Bidders should furnish proof of documents as per Eligibility Criteria in accordance with **Clause- 1.5 & 1.6.**

2.2 COST OF BIDDING

The Bidders shall be responsible for all the costs associated with the preparation of their Proposals and their participation in the Bidding Process. Bidders are advised to inspect and examine the premises and its surroundings and satisfy themselves before submitting their bids. The BDA will not be responsible or in any way liable for such costs, regardless of the conduct or outcome of the Bidding Process.

2.3 VERIFICATION OF INFORMATION

2.3.1. It shall be deemed that by submitting a Proposal, the Bidder has:

a) Made a complete and careful examination of the Bidding/proposal Documents.

b) Received all relevant information requested from the BDA;

c) Acknowledged and accepted the risk of inadequacy, error or mistake in the information provided in the Bidding/proposal Documents;

d) Satisfied with all matters, things, and information necessary and required for submitting an informed Proposal, execution of the Event in accordance with the Bidding/proposal Documents and performance of all its obligations there under;

e) Acknowledged and agreed that inadequacy, lack of completeness or incorrectness of information provided in the Bidding/proposal Documents shall not be a basis for any claim for compensation, damages, extension of

time for performance of its obligations, loss of profits etc. from the BDA, or a ground for termination of the Service Contract; and

f) Agreed to be bound by the undertakings provided by it under and in terms hereof.

2.3.2. The BDA shall not be liable for any omission, mistake, or error on the part of the Service Provider in respect of any of the above or because any matter or thing arising out of or concerning or relating to Tender Document, the Bidding/proposal Documents or the Bidding Process, including any error or mistake therein or in any information or data given by the BDA.

2.4. RIGHT TO ACCEPT AND TO REJECT ANY OR ALL PROPOSALS

2.4.1. Notwithstanding anything contained in this Tender Document, the BDA reserves the right to accept or reject any Proposal and to annul the Bidding Process and reject all Proposals at any time without any liability or any obligation for such acceptance, rejection, or annulment, and without assigning any reasons thereof.

2.4.2. The BDA reserves the right to reject any Proposal and appropriate the EMD if:

a) At any time, a material misrepresentation is made or uncovered, or

b) The Bidder does not provide, within the time specified by the BDA, the supplementary information sought by the BDA for evaluation of the Proposal.

Such misrepresentation/ improper response shall lead to the disqualification of the Bidder. If such disqualification / rejection occurs after the Proposals have been opened and the Selected Bidder gets disqualified / rejected, then the BDA reserves the right to take any such measure as may be deemed fit in the sole discretion of the BDA, including annulment of the Bidding Process.

2.4.3. In case it is found during the evaluation or at any time before signing of the Service Contract or after its execution and during the period of subsistence thereof, that one or more of the qualification conditions have not been met by the Service Provider or the Service Provider has made material misrepresentation or has given any materially incorrect or false information, the Service Provider shall be disqualified forthwith, if not yet appointed as the Service Provider either in the process of issuing of the LoA **(Letter of Award)**or in the process of entering into the Service Contract and if the Service Provider has already been issued the LoA or has entered into the Service Contract, as the case may be, the same shall, notwithstanding anything to the contrary contained therein or in this Tender Document, be liable to be terminated, by a communication in writing by the BDA to the Service Provider, without the BDA being liable in any manner whatsoever to the Service Provider , as the case may be. In such an event, the BDA shall forfeit and appropriate/confiscate the Performance Security, as mutually agreed genuine pre-estimated compensation and damages payable to the BDA for, inter alia, time,

cost, and effort of the BDA, without prejudice to any other right or remedy that may be available to the BDA.

2.4.4. The BDA reserves the right to verify all statements, information and documents submitted by the Bidder in response to the Tender Document. Failure of the BDA to undertake such verification shall not relieve the Service Provider of its obligations or liabilities hereunder nor will it affect any rights of the BDA there under.

2.5 PRE-PROPOSAL CONFERENCE

Pre-Proposal conference of the IT Consultancy shall be convened at the designated date and time as specified in **Clause-1.3.**

During Pre-Proposal conferences, the Bidders will be free to make suggestions for consideration of the BDA. The BDA shall endeavor to provide clarifications and such further information as it may, in its sole discretion, consider appropriate for facilitating a fair, transparent and competitive Bidding Process.

Venue for the pre-proposal conference: Office of Head of E.D.P Cell, Bangalore Development Authority. T. Chowdaiah Road, Kumara Krupa West Bangalore - 560020. *Any changes in the date, time and venue will be uploaded in the e-procurement portal.

2.6. CLARIFICATION

2.6.1 Bidders requiring any clarification on the Tender Document may notify the BDA in writing or by e-mail to the address provided in **Clause-2.9.3**. They should send their queries before the specified date. The responses will be published in e-Procurement platform without disclosing the source of queries. Such clarification shall become part of Tender Document.

2.6.2 The structure for pre-bid queries is:

Sl. No.	Page No.	Clause	Details of query and name of the Bidder/Company	Response from the Department	Remarks

2.6.3 The BDA shall endeavor to respond to the questions raised or clarifications sought by the Bidders. However, the BDA reserves the right not to respond to any question or provide any clarification, in its sole discretion, and nothing in this Clause shall be taken or read as compelling or requiring the BDA to respond to any question or to provide any clarification

2.6.4 The BDA may also on its own motion, if deemed necessary, issue interpretations and clarifications through e-Procurement platform. All clarifications and interpretations issued by the BDA shall be deemed to be part of the Bidding/proposal Documents. Verbal clarifications and information given by BDA, or its employees or representatives, shall not in any way or manner be binding on the BDA.

2.7 Amendment of Tender Document

2.7.1 At any time prior to the Proposal Due Date, the BDA may, for any reason, whether at its own initiative or in response to clarifications requested by a Bidder, modify the Tender Document by the issuance of Addenda after the pre-bid meeting.

2.7.2 Any Addendum thus issued will be published on an e-Procurement platform and the published details will be binding on the participating bidders.

2.7.3 To afford the Bidders a reasonable time for taking an Addendum into account, or for any other reason, the BDA may, at its own discretion, extend the Proposal Due Date. Information about extension of the deadline will be published in e-Procurement platform vide corrigendum.

B. PREPARATION AND SUBMISSION OF PROPOSALS

2.8 Format and Signing of Proposal

2.8.1 The Bidder shall provide the documents listed in the **Clause-2.9.2** in electronic mode through e-portal. The BDA will evaluate only those Proposals that are received in the required formats and complete in all respects. Incomplete and/or conditional Proposals shall be liable to rejection.

2.8.2 All the documents of the Proposal submitted in electronic mode under this Tender Document shall be uploaded on e-procurement platform: https://www.kppp.karnataka.gov.inusing digital signature. For registration and other details please visit the above portal.

2.9 MARKING AND SUBMISSION OF PROPOSAL.

2.9.1 The Bidder shall upload the documents mentioned in **Clause-2.9.2** below on e-procurement platform in the format specified.

2.9.2 Technical Proposal containing the following documents shall be uploaded in e-procurement portal:

a) Letter of Proposal in the prescribed format **Appendix - I**.
b) Details of Bidder and Technical Capacity as per the format provided at **Annex- 1 of Appendix–I.**

c) Financial Capacity of the Bidder& Positive Net worth in the format provided at **Annexe-2 of Appendix–I.**

d) Power of Attorney for signing of Proposal in the prescribed format (if applicable) (**Appendix–II**).

e) Copy of the valid Registrations under relevant Acts / Rules.

f) Copy of PAN Card.

g) Copy of GST Registration Certificate.

h) Documentary proof for completion of Projects (ref. 3 of **Annexe-1** of **Appendix-I**).

Financial Proposal: Bidders shall enter the Financial Proposal in the relevant slot provided in e-portal (provision for uploading Financial Proposal specified in Appendix-IV in e-portal is disabled w.e.f. XX-XX-XXXX).

Financial Proposal as per Format-3 is only for reference of Bidder.

2.9.3 Address for communication and sending queries:
Send all the Queries to systems.manager@bdabangalore.org

2.9.4 BDA reserves the right to seek original documents for verification of any of the documents or any other additional information / documents upon opening of the Bidding/proposal Documents.

2.10 PROPOSAL DUE DATE.

2.10.1 The Proposal should be submitted in electronic mode in the e-procurement website before the Proposal Due Date for bid submission specified in Clause-1.3. Proposals submitted either by e-mail or physical form will not be acceptable.

2.10.2 The BDA may, in its sole discretion, extend the Proposal Due Date by issuing an Addendum in accordance with **Clause-2.7** uniformly for all Bidders.

2.11 LATE PROPOSALS.

Proposals received by BDA through e-Procurement platform after the specified time on the Proposal Due Date shall not be eligible for consideration and shall be summarily rejected as non-responsive.

2.12 FINANCIAL PROPOSAL.

2.12.1 The Financial Proposal is to be submitted only through e-procurement platform.

2.12.2 The Service Provider shall specify the Financial Proposal in Indian Rupees.

Financial Proposal shall be Exclusive of GST & other taxes and levies applicable from time to time.

2.12.3 The opening of Proposals and acceptance thereof shall be substantially in accordance with this Tender Document.

2.13 MODIFICATIONS OR SUBSTITUTIONS OR WITHDRAWAL OF PROPOSALS.

2.13.1 No Proposal shall be modified, substituted, or withdrawn by the Bidder after the Proposal Due Date.

2.13.2 Any alteration / modification in the Proposal or additional information supplied subsequent to the Proposal Due Date, unless the same has been expressly sought for by BDA, shall be disregarded.

2.14 REJECTION OF PROPOSALS.

2.14.1 The BDA reserves the right to accept or reject all or any of the Proposals without assigning any reason whatsoever. It is not obligatory for the BDA to accept any Proposal or to give any reasons for their decision.

2.14.2 The BDA reserves the right not to proceed with the Bidding Process at any time, without notice or liability and to reject any Proposal without assigning any reasons.

2.15 VALIDITY OF PROPOSALS.

The Proposals shall be valid for a period of **90** day**s** from the Proposal Due Date (Proposal Validity Period). The Proposal Validity Period may be extended by mutual consent of the respective Service Provider and the BDA.

2.16 CONFIDENTIALITY.

Information relating to the examination, clarification, evaluation and recommendation for the Bidders shall not be disclosed to any person who is not officially concerned with the process or is not a retained professional advisor advising the BDA in relation to or matters arising out of or concerning the Bidding Process. The BDA will treat all information, submitted as part of the Proposal, in confidence and will require all those who have access to such material to treat the same in confidence. The BDA may not divulge any such information unless it is directed to do so by any statutory entity that has the power under law to require its disclosure or is to enforce or assert any right or privilege of the statutory entity and/ or the BDA.

2.17 CORRESPONDENCE WITH THE BIDDER.

The BDA shall not entertain any correspondence with any Bidder in relation to acceptance or rejection of any Proposal.

C. PERFORMANCE SECURITY

2.18 PERFORMANCE SECURITY

2.18.1 The selected Service Provider should provide a Performance Security of 5% of the total bid value in the format set out in the Tender Document by way of an unconditional & irrevocable Bank Guarantee required under the draft Service Contract OR Bank Fixed Deposit lien to Commissioner of BDA. This Performance Security shall be submitted after receipt of Letter of Award and before signing the Service Contract. The Performance Security shall be kept valid in full force and effect for a period of Two weeks after the expiry of the Service Contract.

2.18.2 Failure of the selected Service Provider to comply with the requirement of the **Clause-2.18.1** shall constitute sufficient grounds for the annulment of the LoA and forfeiture of the EMD. In such an event, BDA shall reserve the right to take any such measures as may be deemed fit in the sole discretion of BDA, including annulment of bidding process.

SECTION - 3: EVALUATION OF PROPOSALS

3.1. OPENING AND EVALUATION OF PROPOSALS

The BDA shall open the Proposals in the e-portal as per the Schedule of Bidding process specified in **Clause-1.3**, at the office of BDA, Bengaluru - 560 020, in the presence of the IT Consultancy who chooses to attend.

3.1.1. The BDA will examine and evaluate the Proposals in accordance with the provisions set out in **Section-3**.

3.1.2. To facilitate evaluation of Proposals, the BDA may, at its sole discretion, seek clarifications/ information from any Bidder regarding its Proposal.

3.1.3. Any information contained in the Proposal shall not in any way be construed as binding on the BDA, its agents, successors, or assigns, but shall be binding against the Service Provider if the Project is subsequently awarded to it under the Bidding Process based on such information.

3.1.4. The BDA reserves the right not to proceed with the Bidding Process at any time without notice or liability and to reject any Proposal without assigning any reasons thereof.

3.1.5. CONTACTS DURING PROPOSAL EVALUATION

Proposals shall be deemed to be under consideration immediately after they are opened and until such time the BDA makes official intimation of award/ rejection to the Bidders. While the Proposals are under consideration, bidders and/ or their representatives or other interested parties are advised to refrain from contacting by any means, the BDA and/ or their employees/ representatives on matters related to the Proposals under consideration.

3.2. TEST OF RESPONSIVENESS

3.2.1. Prior to evaluation of Proposals, the BDA shall determine whether each Proposal is responsive to the requirements of the Tender Document. A Proposal shall be considered responsive only if:

a) It is received as per the format at **Appendix - I** and its Annexures.
b) It is received on or before the Proposal Due Date including any extension thereof pursuant to **Clause-2.10.2.**
c) It is submitted as stipulated in **Clauses- 2.9.**
d) It is signed and marked as stipulated in **Clauses -2.8** and **Clause -2.9.**
e) Tender Processing fee and EMD are paid through e-procurement portal.
f) It is accompanied by the Power of Attorney as specified in **Clauses- 2.1.6**(if applicable).
g) It contains all the information (complete in all respects) as requested in this Tender Document (in formats same as those specified).

h) It does not contain any condition or qualification; and
i) It is not non-responsive in terms hereof.

3.2.2. Only substantially responsive proposals will be taken up for further evaluation.

The BDA reserves the right to reject any Proposal which is non-responsive and no request for alteration, modification, substitution, or withdrawal shall be entertained by the BDA in respect of such Proposal.

3.3. EVALUATION OF TECHNICAL PROPOSAL

3.3.1 The Bidder who will be fulfilling all the eligibility criteria, shall be treated as eligible and taken up for technical evaluation. Following shall be the parameter for technical evaluation:

Sl. No.	Evaluation Component	Max Marks	Scoring Method
	1. Work Experience = 25 Marks		
1.1	**E-Auction / E-Procurement Project Experience** Design, development, and implementation of e-Auction, e-Procurement, or online bidding platforms for Central/State Govt, PSUs, Boards, Corporations, or ULBs in India.	**15**	1 projects = 8 marks 2 projects = 13 marks 3 or more = 15 marks *(Work Orders / LOA / Completion Certificates mandatory)*
1.2	**Government IT Projects in Karnataka** Completed turnkey IT projects (web application / portal / enterprise system) for Central/State Govt, PSUs, Boards, or Corporations within Karnataka.	**10**	1 projects = 6 marks 2 projects = 7 marks 3 or more = 10 marks *(Work Orders / LOA / Completion Certificates mandatory)*
	2. Financial Turnover = 25 Marks		
2.1	**Average Annual Turnover** Average annual turnover during FY 2022-23, FY 2023-24, and FY 2024-25.	**15**	Rs. 10 Cr = 5 marks Rs. 15 Cr = 8 marks Rs. 20 Cr = 11 marks Rs. 25 Cr = 13 marks Rs. 30 Cr or above = 15 marks *(CA-certified statements mandatory)*
2.2	**Positive Net Worth** Positive net worth for each of FY 2022-23, FY 2023-24, and FY 2024-25.	**10**	Positive in all 3 years = 5 marks Above Rs. 5 Cr all 3 years = 8 marks Above Rs. 10 Cr all 3 years = 10 marks *(CA-certified Net Worth Certificate mandatory)*
	3. Certifications = 10 Marks		
3.1	**ISO 9001 - Quality Management System** Valid certificate from accredited CB, valid as on Proposal Due Date.	**3**	Valid certificate = 3 marks Not available = 0 marks

Sl. No.	Evaluation Component	Max Marks	Scoring Method
3.2	**ISO 27001 - Information Security Management** Valid certificate from accredited CB, valid as on Proposal Due Date.	**3**	Valid certificate = 3 marks Not available = 0 marks
3.3	**CMMI Level 3 or Above** Valid appraisal certificate from CMMI Institute licensed by ISACA.	**4**	CMMI Level 3 = 3 marks CMMI Level 5 = 4 marks Not available = 0 marks
	4. Technical Documents & Manpower = 15 Marks		
4.1	**Technical Approach Document** Proposed system architecture, technology stack, database design, integration strategy, implementation plan with milestones, testing strategy, risk mitigation, and data migration approach.	**5**	Comprehensive = 5 marks Good coverage = 3-4 marks Basic = 1-2 marks Not submitted = 0 marks
4.2	**Key Personnel - Qualifications & Experience** CVs of: Project Manager, Solution Architect, Senior Backend Developer, Senior Frontend Developer, QA Lead, Database Specialist, Security Specialist. Parameters: qualifications, experience, certifications, Govt project experience.	**10**	Highly qualified, 5+ yrs avg = 8-10 marks Good = 6-8 marks Acceptable = 5-6 marks Inadequate = 0 marks
	5. Live Demonstration / Presentation = 25 Marks		
5.1	**UI/UX Design & Technology Stack Presentation** UI/UX approach with wireframes/mockups; proposed tech stack with justification; database design; security architecture; scalability and load balancing; integration approach (payment gateway, DSC, notifications, NTP).	**20**	Modern UI/UX, well-justified stack = 15-20 marks Good design and selection = 10-15 marks Basic = 5-10 marks
5.2	**Technical Q&A and RFP Compliance** Answers to TEC questions on architecture, real-time processing, concurrency, security, fraud detection, audit logging, deployment. Alignment with Section 6 (Scope of Services).	**5**	Strong understanding, full alignment = 4-5 marks Good understanding = 2-3 marks Limited = 0-1 marks
	GRAND TOTAL (1 + 2 + 3 + 4 + 5)	**100**	

QUALIFYING CRITERIA (TECHNICAL)

Item	Condition
Minimum Overall Technical Score	Bidder must score at least 75 marks out of 100
Minimum Live Demo Score (Component 5)	Bidder must score at least 15 marks out of 25
Technical Qualification	Bidder must satisfy both conditions to qualify for Financial Evaluation
Disqualification	If overall < 75 or Live Demo < 15, the bid shall be technically rejected

3.4. EVALUATION OF FINANCIAL PROPOSAL

Evaluation of Bids shall follow the Quality and Cost Based Selection (QCBS) Method as per the KTPP Act. The Technical and Financial Offers will be evaluated based on the two-cover system.

1. **Evaluation of Technical Bids:** Bidders achieving minimum qualifying marks (overall ≥ 75 and Live Demo ≥ 15) shall be shortlisted. Financial bids of only shortlisted Bidders shall be opened.
2. **Evaluation of Financial Bids:** The lowest financial proposal (L1) shall receive a Financial Score (SF) of 100. Other bids scored inversely: SF = (L1 / Ln) × 100.
3. **Combined Score:** Final Score (S) = (ST × 75%) + (SF × 25%), where ST = Technical Score, SF = Financial Score.
4. **Tie-Breaking:** In the event of a tie, the Bidder with the higher technical score shall be selected. If still tied, a draw of lots shall decide.
5. **Selection:** The highest combined score Bidder (H1 Bidder) shall be selected based on the QCBS Method.

Example:

Bidder	Technical (ST)	Weighted Tech (75%)	Financial (SF)	Weighted Fin (25%)	Total (S)
Bidder A	85	63.75	95	23.75	**87.50**
Bidder B	78	58.50	100	25.00	**83.50**
Bidder C	90	67.50	80	20.00	**87.50**

In the above example, Bidders A and C tie (87.50). Bidder C has a higher technical score (90 vs 85) and is selected.

1. variation in the rates, etc., will not be allowed on any grounds, such as a mistake or misunderstanding, after the Bid has been submitted.

2. The final selection of the bidder will be based on the QCBS method, considering both technical and financial scores. The highest combined score bidder (H1 bidder) will be selected based on the QCBS Method.

3. In the event of a tie, the bidder with the higher technical score will be awarded the contract. If there is still a tie, a further random draw (e.g., draw of lots) will decide.

3.5. SELECTION OF SERVICE PROVIDER

3.5.1. If two or more Bidders achieve same techno-commercial marks (the "Tie-Bidders"), the BDA shall consider “Tie-Bidders” for financial bidding process.

3.5.2. BDA reserves the right to negotiate with the selected Bidder regarding Financial Proposal, Time Lines for completion of different stages of work. If, the selected Bidder withdraws or is not selected for any breach of terms and conditions of the Tender Document, the BDA reserves the right to take any such steps as may be deemed fit

in the sole discretion of BDA.

3.5.3. After selection, a Letter of Award (the "LoA") shall be issued, in duplicate, by the BDA to the Selected Service Provider and the Selected Service Provider shall, within 7 (seven) days of the receipt of the LoA, sign and return the duplicate copy of the LoA in acknowledgement thereof. After acknowledging the LoA, the Service Provider shall submit the Performance Security as specified in this Tender Document. In the event the duplicate copy of the LoA duly signed by the Selected Service Provider is not received by the stipulated date, the BDA may, unless it consents to extension of time for submission thereof, forfeit the EMD of such Service Provider. **The BDA may award LoA to L2 bidder subject to his willingness to match the financial quote as submitted by the L1 bidder and meeting all the terms and conditions of the RFP.**

3.5.4. The Selected Service Provider shall execute the Service Contract within the period of 14 (fourteen) days from the date of LoA. The draft of the Service Contract/Service Agreement is provided as part of the Tender Document. Any changes/modifications, if required, in the Service Agreement / Service Contract draft can be mutually discussed and changed before signing the Agreement.

3.6. PENALTY

The BDA shall impose penalty on the Service Provider for any delay in execution, if it is solely attributable to the fault of the Service Provider. Failure in carrying out the Project in respect of quality and adequacy, as specified in the Service Contract shall also attract penalty. The quantum of penalty shall be governed by the service Contract (draft).

SECTION – 4: FRAUD AND CORRUPT PRACTICES

4.1 The Bidders and their respective officers, employees, agents and advisers shall observe the highest standard of ethics during the Bidding Process and subsequent to the issue of the LoA and during the subsistence of the Service Contract. Notwithstanding anything to the contrary contained herein, or in the LoA or the Service Contract, the BDA shall reject a Proposal, withdraw the LoA or terminate the Service Contract, as the case may be, without being liable in any manner whatsoever to the Bidder, as the case may be, if it determines that the Bidder or as the case may be, has, directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice in the Bidding Process. In such an event, the BDA shall forfeit and appropriate the Bid Security or Performance Security as mutually agreed genuine pre-estimated compensation and damages payable to the BDA towards, inter alia, time, cost and effort of the BDA, without prejudice to any other right or remedy that may be available to the BDA hereunder or otherwise.

4.2 Without prejudice to the rights of the BDA under **Clause-4.1** hereinabove and the rights and remedies which the BDA may have under the LoA or the Service Contract, if a Service Provider, as the case may be, is found by the BDA to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice during the Bidding Process, or after the issue of the LoA or the execution of the Service Contract, such Service Provider shall be disqualified and their agreement shall be terminated.

4.3 For the purposes of this **Clause-4**, the following terms shall have the meaning hereinafter respectively assigned to them:

a) **"corrupt practice"** means (i) the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the actions of any person connected with the Bidding Process (for avoidance of doubt, offering of employment to or employing or engaging in any manner whatsoever, directly or indirectly, any official of the BDA who is or has been associated in any manner, directly or indirectly with the Bidding Process or the LoA or has dealt with matters concerning the Service Contract or arising there from, before or after the execution thereof, at any time prior to the expiry of one year from the date such official resigns or retires from or otherwise ceases to be in the service of the BDA, shall be deemed to constitute influencing the actions of a person connected with the Bidding Process); or (ii) engaging in any manner whatsoever, whether during the Bidding Process or after the issue of the LoA or after the execution of the Service Contract , as the case may be, any person in respect of any matter

relating to the Project or the LoA or the Service Contract , who at any time has been or is a legal, financial or technical adviser of the BDA in relation to any matter concerning the Project;

b) "**fraudulent practice**" means a misrepresentation or omission of facts or suppression of facts or disclosure of incomplete facts, to influence the Bidding Process;

c) "**coercive practice**" means impairing or harming, or threatening to impair or harm, directly or indirectly, any person or property to influence any person's participation or action in the Bidding Process;

d) "**undesirable practice**" means (i) establishing contact with any person connected with or employed or engaged by the BDA with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the Bidding Process; or (ii) having a Conflict of Interest; and

e) "**restrictive practice**" means forming a cartel or arriving at any understanding or arrangement among Bidders with the objective of restricting or manipulating a full and fair competition in the Bidding Process.

SECTION – 5: MISCELLANEOUS

5.1 The Bidding Process shall be governed by, and construed in accordance with, the laws of India and the Courts at Bengaluru shall have exclusive jurisdiction over all disputes arising under, pursuant to and/ or about the Bidding Process.

5.2 The BDA, in its sole discretion and without incurring any obligation or liability, reserves the right, at any time, to;

a) Suspend and or cancel the Bidding Process and/ or amend and/ or supplement the Bidding Process or modify the dates or other terms and conditions relating thereto;

b) Consult with any Bidder to receive clarification or further information;

c) Retain any information and/ or evidence submitted to the BDA by, on behalf of, and/ or in relation to any Bidder; and/ or

d) Independently verify, disqualify, reject and/ or accept all submissions or other information and/ or evidence submitted by or on behalf of any Bidder.

5.3 It shall be deemed that by submitting the Proposal, the Bidder agrees and releases the BDA, its employees, agents and advisers, irrevocably, unconditionally, fully and finally from any and all liability for claims, losses, damages, costs, expenses or liabilities in any way related to or arising from the exercise of any rights and/ or performance of any obligations hereunder, pursuant hereto and/ or in connection herewith and waives any and all rights and/ or claims it may have in this respect, whether actual or contingent, whether present or future.

SECTION 6
SCOPE OF SERVICES

6.1 Introduction & Context

The Bangalore Development Authority (BDA) seeks to develop and deploy a dedicated, end-to-end E-Auction Management System (AMS) that is purpose-built for its property disposal and allotment workflows, covering residential/commercial sites, built-up flats, and other immovable assets. The selected Bidder shall be responsible for the design, development, testing, deployment, and maintenance of the E-Auction module as part of BDA's broader Digital Transformation initiative.

6.1.1 Objectives of BDA's E-Auction Module

1. Establish a transparent, auditable, and legally defensible auction process for disposal of BDA properties.
2. Provide full lifecycle coverage from auction creation through live bidding to award closure, payment, and refund.
3. Enable configuration-driven flexibility to accommodate Forward (highest-bid-wins) and Reverse (lowest-bid-wins) auction types without code changes.
4. Support Direct, Prequalified, and Restricted auction models with item-wise and group-wise structures across all bid types.
5. Implement verified, server-synchronised delta time logic with configurable maximum extension caps to prevent abuse.
6. Ensure auctions start and close exactly at the configured times through system-triggered automation.
7. Enforce complete bidder identity masking during live auctions with no partial exposure.
8. Support configurable minimum/maximum bid thresholds to prevent unrealistic bidding.
9. Implement controlled Force Close with mandatory approval workflow and audit trail.
10. Provide configurable tie-breaking mechanisms for scenarios where multiple bidders quote identical H1/L1 values.
11. Enable price justification workflow for abnormally high or low bids before award finalization.
12. Integrate with payment gateways, notification services, and Digital Signature Certificate (DSC) providers.
13. Deliver real-time monitoring dashboards with comprehensive reporting for authorized BDA officials.
14. Ensure compliance with Indian data protection regulations (DPDP Act) and applicable government procurement norms.
15. Provide mobile-responsive access for bidders during live auction participation.
16. Implement tamper-proof, legally timestamped bid logging with immutable storage mechanisms to ensure forensic-grade auditability.
17. Support multi-tenancy architecture enabling other Government organisations to use the system if required by BDA.
18. Incorporate fraud detection and anti-collusion controls including IP tracking, bid pattern analysis, and rate limiting.

19. Provide a robust legal framework covering bid irrevocability, dispute resolution, and evidentiary validity of electronic records.
20. Support bulk auction management for batch creation and publication of multiple properties from same or multiple layouts.
21. Implement weighted scoring-based evaluation for Prequalified auctions with Technical, Financial, and Combined evaluation logic.

6.2 Overall Scope of Services

The Bidder shall deliver a fully functional, web-based E-Auction Management System covering the following broad service areas:

Sl.	Service Area	Description
1	**System Design, Development & Deployment**	End-to-end platform covering all functional modules, UI/UX design, backend development, database design, and production deployment on BDA-specified infrastructure.
2	**User & Access Management**	RBAC with configurable permissions, multi-level user hierarchy, department-wise data isolation, and bidder self-registration with KYC/PAN verification API integration.
3	**Auction Lifecycle Management**	Auction creation, configuration, scheduling, approval workflow, publication, amendment, cancellation, bulk auction management, system-triggered auto-start, and complete audit trail.
4	**Bidder Participation & Evaluation**	Auction discovery, participation, fee/EMD payment, eligibility validation, document review, weighted scoring-based evaluation, clarification handling, and qualification/rejection.
5	**Live Bidding Engine**	Real-time bidding with server-synchronised delta-time extensions, configurable maximum extension cap, bid floor/ceiling, complete identity masking, fraud detection, rate limiting, concurrency control, and mobile-responsive interface.
6	**Auction Monitoring & Control**	Live monitoring dashboard, bid tracking, controlled Force Close with approval workflow, alert/exception management, suspicious activity detection, and exportable reports.
7	**Auction Closure & Awarding**	Automated H1/L1 ranking with configurable tie-breaking, price justification workflow, multi-level approval, LOI generation, final award closure.
8	**Payment & Refund Management**	Online payment gateway integration, optional offline payment support, bank reconciliation API integration, payment dispute handling, refund escalation SLA, and automated/manual EMD refund processing.
9	**Notification & Communication**	Email (mandatory) and SMS (optional) notifications with configurable templates for all lifecycle events.
10	**Audit, Logging & Compliance**	Tamper-proof, legally timestamped, immutable audit trails with cryptographic integrity verification; searchable logs; configurable audit reports; DPDP Act compliance.

Sl.	Service Area	Description
11	**Fraud Detection & Anti-Collusion**	IP tracking, device fingerprinting, same-device multi-account detection, bid pattern analysis, cartel detection analytics, rate limiting, CAPTCHA/bot protection, and ML-based suspicious behaviour flagging.
12	**Legal & Dispute Resolution Framework**	Bid irrevocability provisions, legal validity of electronic records, dispute handling procedures, authoritative time source certification, and evidentiary standards for audit logs.
13	**System Integration**	Payment gateway, notification gateway, DSC provider, BDA Layout Information System, KYC/PAN verification API, and bank reconciliation API.
14	**Configuration Management**	Master configuration console for all auction settings, bid types, thresholds, evaluation criteria, timing, approvals, payments, refunds, notifications, identity masking, and DSC applicability.
15	**Multi-Tenancy & Scalability**	Multi-tenant architecture enabling other Government organisations to use the system; horizontal scaling, load balancing, and peak usage handling.
16	**Data Migration & Transition Support**	Migration of historical auction data from existing records into the new system.
17	**Training & Capacity Building**	Role-specific training for BDA officials and bidder orientation sessions.
18	**Warranty & Post-Deployment Support**	Warranty maintenance, bug fixes, security patches, SLA-bound operational support with defined penalty clauses.

6.3 Detailed Functional Scope – Module-wise Requirements

The following sub-sections describe the functional scope for each module. The Bidder shall ensure that all requirements are fully addressed. Items highlighted in yellow are additions based on expert review feedback.

6.3.1 User Registration & Authentication Module

A. Bidder Registration

1. Self-registration using mandatory fields: Email ID and PAN (Permanent Account Number).
2. System-enforced uniqueness: one PAN maps to exactly one account; one Email maps to exactly one account.
3. Format validation of PAN and Email during registration.
4. Real-time PAN verification through integration with an authorised KYC/PAN verification API (e.g., NSDL/UTIITSL) to validate the authenticity of the PAN number, not merely its format. The system shall verify that the PAN is active, matches the registered name, and is not flagged or deactivated.
5. Email verification via secure link or OTP within a configurable time window.
6. On successful verification: automatic account activation, generation of unique User ID and temporary password, credentials dispatched to registered email.
7. On verification failure/expiry: provision for re-initiation of verification.

8. Device fingerprinting during registration to detect and flag attempts to create multiple accounts from the same device or browser environment.

B. Login & Session Management

1. Login using User ID or Email with password.
2. Configurable account lockout policy after defined number of failed login attempts.
3. Session-based authentication for all users; automatic session timeout after configurable idle period.
4. Session hijacking prevention through secure cookie attributes (HttpOnly, Secure, SameSite), session token rotation on privilege escalation, and binding sessions to client IP/device fingerprint.
5. Password Reset / Forgot Password via registered email (secure link or OTP), with all reset actions logged.
6. CAPTCHA or equivalent bot protection on login, registration, and password reset pages to prevent automated credential attacks.

C. Account Validation Rules

1. PAN must be unique and verified system-wide; duplicate PAN registrations shall be rejected.
2. Email must be unique system-wide; duplicate email registrations shall be rejected.
3. Only verified and active users shall be permitted to participate in auctions.

6.3.2 User Roles & Access Management Module

A. Defined User Roles

The system shall support, at minimum, the following user roles with configurable permissions:

1. Bidder – Participates in auctions, places bids, and manages own payments/refunds.
2. Auction Notice Creator – Creates and configures auction notices within assigned department scope.
3. Auction Notice Approver – Reviews and approves or rejects submitted auction notices with remarks.
4. Auction Inviting Authority – Publishes approved auction notices.
5. Auctioning Authority – Monitors live auctions, views bids and metrics, and initiates control actions (subject to approval workflow).
6. Auction Evaluator – Evaluates bidder submissions using configurable scoring criteria for Prequalified auctions.
7. Auction Finalization Authority – Reviews H1/L1 ranking, requests price justification, approves final bidder, issues LOI.
8. Payment Reconciler – Monitors payment/refund transactions, reconciles with gateway reports, handles payment disputes and refund escalations.
9. Auction Admin – Manages department-level configurations, bulk auction operations, and users.
10. Super Admin – Configures system-wide features, manages master configurations, tenant onboarding, and policies.

B. RBAC Framework Requirements

1. Access to modules and actions shall be strictly controlled based on assigned roles.
2. Critical actions (approval, force close, awarding, publication) shall require explicit permissions.
3. Role permissions shall be configurable by Super Admin without code changes.
4. Department-wise data isolation: users of one department shall not access or modify another department's data.
5. Each user shall belong to only one department and cannot operate across departments.

6. Audit logs shall not be modifiable or deletable by any role, including Super Admin. Audit log access shall be read-only for all roles.

C. User Management

1. Create, activate, and deactivate department users.
2. Assign users to departments with enforced scope restrictions.
3. Assign and reassign roles to users; map roles to menu/screen access.
4. Post/Designation management with optional reporting hierarchy.
5. All user management actions shall be audited.

6.3.3 Master Data & System Configuration Module

The system shall be fully configuration-driven. Super Admin and Auction Admin roles shall control features centrally through a master configuration console without code changes.

A. Master Data Management

1. Departments: Create and manage departments; each department shall have its own users, catalogue, and auctions.
2. Catalogue Management (Department-wise): Define Catalogue → Sub-Catalogue → Items hierarchy. Each department maintains its own catalogue. System may support a shared/global catalogue (read-only).
3. Item Attributes: Name, Description, Unit of Measurement (UOM), and other configurable attributes.
4. UOM Master: Define and manage standard units of measurement.
5. Holiday Calendar: Configure holidays for evaluation working-day calculations.
6. Roles & Permissions Master: Define roles and map permissions.
7. Designations/Posts: Create organizational designations and maintain hierarchy.
8. Integration with BDA Layout Information System to ensure that only qualified and undisputed properties are eligible for auction. The system shall validate property eligibility status against the Layout Information System before an auction notice can be submitted for approval.

B. System Configuration Parameters

Configuration Category	Parameters / Capabilities
Auction Settings	Enable/disable auction creation per department; configure auction types (Forward/Reverse); configure item-wise or group-wise structure for all bid types including Direct; define mandatory fields; configure lifecycle stages.
Bid Type Settings	Enable/disable bid types (Direct/Prequalified/Restricted); define default bid type per department; control evaluation applicability; configure restricted bidder selection rules.
Bid Threshold Settings	Configure minimum bid value (floor) for Reverse auctions and maximum bid value (ceiling) for Forward auctions, as absolute value or percentage of initial price. System shall reject bids breaching thresholds.
Evaluation & Scoring Settings	Configure evaluation mode: binary (Qualified/Rejected) or weighted scoring. For weighted scoring: define Technical score weightage, Financial score weightage, and Combined evaluation formula. Configure minimum qualifying scores per criterion. Configure multi-evaluator assignment and conflict resolution rules.

Configuration Category	Parameters / Capabilities
EMD & Fee Settings	Enable/disable auction participation fee; configure EMD type (Common/Item-wise/Group-wise); configure refund behaviour (automatic/manual).
Timing & Auto-Start Settings	Enable/disable delta time; configure allowed delta options (15/30 min); configure maximum extension cap (e.g., maximum 10 extensions or maximum total extended duration); configure cutoff time for next-day continuation; define minimum gap between Participation End and Auction Start; enable system-triggered auto-start.
Approval Settings	Enable/disable price justification step; configure single-bidder handling; configure Force Close approval workflow (mandatory approver, recorded reason).
Auction Control	Enable/disable Force Close with mandatory approval and reason recording.
Tie-Breaking Settings	Configure tie-breaking rules for identical H1/L1 bids: earliest timestamp (primary), system-generated random selection (secondary). Configurable per department.
Bulk Auction Settings	Configure batch auction creation and publication; enable batch processing for multiple properties from same or multiple layouts; configure batch approval workflows.
Payment & Refund Settings	Configure payment gateway parameters; refund mode (automatic/manual); refund timelines; payment dispute escalation SLA (e.g., resolution within X working days); failed refund escalation workflow and maximum retry attempts.
Notification Settings	Enable/disable notification types; configure triggers and channels (Email, SMS); configure templates.
DSC Settings	Enable/disable DSC requirement; configure applicability; define DSC type.
Identity Masking Settings	Enforce complete bidder identity masking. No nickname, PAN fragment, username, or any identifiable attribute shall be exposed during live auctions.
Fraud & Anti-Collusion Settings	Configure IP tracking, device fingerprinting, same-device multi-account detection thresholds, bid pattern analysis parameters, rate limiting rules (maximum bids per minute per bidder), CAPTCHA triggers, and suspicious activity alert thresholds.
Multi-Tenancy Settings	Configure tenant onboarding, tenant-specific branding, data isolation policies, and shared infrastructure resource allocation.
Governance & Audit	Log all configuration changes; apply changes without downtime; support department-wise and tenant-wise configurations.

6.3.4 Auction Management Module

This module covers end-to-end auction setup, including creation, configuration, scheduling, approval, publication, amendment, cancellation, and bulk operations.

A. Auction Creation

1. Create a new auction notice with basic details: title, description, department, auction type (Forward/Reverse), and bid type (Direct/Prequalified/Restricted).
2. Auction shall be mandatorily associated with a department; system auto-tags with creator's department.
3. Item-wise auction structure shall be supported for all bid types including Direct.
4. Save as Draft / Submit for Approval. Edit permitted until submission.
5. Mandatory fields enforced as per master configuration.
6. Before submission for approval, system shall validate property eligibility against BDA's Layout Information System to ensure only qualified and undisputed properties proceed to auction.

B. Auction Configuration

1. Configure item-wise or group-wise structure for any bid type.
2. Set pricing parameters: initial price, bid change value (minimum increment/decrement).
3. Select price type: Inclusive or Exclusive of GST. Price format clearly displayed to all bidders.
4. Configure bid threshold: minimum value (floor) for Reverse auctions and/or maximum value (ceiling) for Forward auctions.
5. Configure EMD type and auction fee (if enabled).
6. Select delta time from allowed options; configure maximum extension cap to prevent indefinite extensions from last-second bidding loops.
7. Configure cutoff time and next-day continuation rules.
8. Define terms and conditions, including bid irrevocability provisions.

C. Restricted Bidder Configuration

1. Configure invited bidders list via selection of registered bidders or upload of bidder list.
2. Only configured/approved bidders can view, participate in, or make payments.
3. Non-invited users shall have no access. Invited list becomes read-only after submission for approval.

D. Item & Group Management

1. Add items with Name, Description, UOM. Create groups and map items to groups.
2. Define item/group-level pricing and EMD where applicable.
3. Catalogue-based item selection from department catalogue with department isolation enforced.
4. Bulk upload via predefined Excel template with validation and row-level error reporting.

E. Document Management

1. Upload supporting documents: tender documents, specifications, terms.
2. Define mandatory documents for bidders. Classification: Public and Restricted.
3. File type/size restrictions enforced. Optional versioning. Document access audited.

F. Auction Scheduling & Auto-Start

1. Configure Participation Window (start/end) and Live Auction Window (start/end).

2. Validation: Participation Start < Participation End ≤ Auction Start < Auction End; minimum gap enforced.
3. All times in IST, synchronised to authoritative NTP time source.
4. System-triggered automatic auction start at the exact configured time. No manual intervention required. System shall pre-initialise auction state before start time so bidders can begin immediately.

G. Auction Notice Approval

1. Review submitted auction notice; validate compliance with department policies.
2. Approve or Reject with mandatory remarks. On rejection: sent back for modification.

H. Auction Publication

1. Publish approved auction notice. System triggers notifications to eligible bidders.
2. Only approved auctions can be published. Publication action audited.

I. Bulk Auction Management

1. System shall support bulk auction creation and publication for batch processing of multiple properties (e.g., 10, 50, or 100+ sites from same or multiple layouts) in a single operation.
2. Bulk operations shall support: batch creation from Excel/CSV upload with property details, batch approval workflow, batch publication, and batch status tracking.
3. Analytics dashboard shall provide consolidated views for bulk auction batches including total properties, auction status distribution, total EMD collected, bidder participation rates, and revenue summaries.

J. Auction Amendment (Addendum & Corrigendum)

1. Addendum: clarifications or additional documents. No direct edit of original fields.
2. Corrigendum: date changes only, compliant with minimum gap rules.
3. Amendments require approval; original data preserved (version history). Bidders notified.

K. Auction Cancellation

1. Cancellation supported: before start, during live auction, after closure but before awarding.
2. Mandatory reason and approval. EMD refund triggered; auction fee non-refundable.
3. All cancellation actions audited. System prevents duplicate cancellation.

6.3.5 Bidder Participation Module

A. Auction Discovery & Search

1. View published auctions. Search/filter by department, title/reference, type, date range.
2. View auction details: items/groups, schedule, EMD/fee, documents, terms.

B. Participation Submission

1. Submit interest within Participation Window by selecting items or groups.
2. Cancellation permitted before Participation End; resubmission with corrected details.
3. Payment reuse on resubmission (no duplicate payment). Not allowed after Participation End.

C. Payment Handling (Fee & EMD)

1. System calculates payable: auction fee (non-refundable) and EMD (refundable).

2. Online payment (mandatory): integrated gateway (net banking, UPI, debit/credit cards).
3. Offline payment (optional): NEFT/RTGS or OTC; bidder uploads proof; manual verification.
4. Payment before Participation End. Failed payments retried. Duplicate prevention. All attempts logged.

D. Eligibility Validation

1. Direct: payment-based eligibility only.
2. Prequalified: evaluation approval required (see Section 6.3.6).
3. Restricted: only invited bidders allowed. Only eligible bidders access live bidding.

6.3.6 Evaluation Module (Prequalified Auctions)

This module applies to Prequalified auctions. It defines evaluation processes including document review, scoring, clarification, and qualification/rejection.

1. Evaluation performed after participation submission and before live auction.
2. Evaluator accesses submitted documents, reviews against eligibility criteria, records observations.
3. Clarification requests may be raised; bidder responds within configured timeline. If no response, evaluator proceeds on available information.
4. Evaluation actions on configured working days only (Holiday Calendar enforced).

Weighted Scoring-Based Evaluation

1. The system shall support configurable evaluation modes: (a) Binary evaluation (Qualified/Rejected) as the default mode, and (b) Weighted scoring-based evaluation when enabled in master configuration.
2. For weighted scoring, the system shall support: Technical Evaluation with configurable criteria and weightages (e.g., experience, capability, compliance); Financial Evaluation with configurable scoring parameters; and Combined Evaluation using a configurable formula (e.g., 70% Technical + 30% Financial).
3. Configurable minimum qualifying scores per criterion (e.g., minimum 60% in Technical to qualify for Financial evaluation).
4. Multi-Evaluator Support: the system shall support assignment of multiple evaluators to the same auction. In case of scoring discrepancies or conflicts between evaluators, the system shall provide configurable conflict resolution mechanisms: (a) Average of all evaluator scores; (b) Escalation to a senior evaluator/committee for final determination; (c) Mandatory justification for scores that deviate beyond a configurable threshold from the mean.
5. Evaluation scorecards and remarks shall be maintained in the audit trail. Outcome: Qualified or Rejected, with detailed scoring breakdown visible to authorised roles.
6. Post-evaluation, auction schedule may be revised subject to minimum gap rules and bidder notification.

6.3.7 Live Bidding Module

The live bidding engine is the core transactional component and must be designed for high concurrency, low latency, and strict data integrity.

A. Live Auction Flow

1. Auction becomes active at the exact configured start time through system-triggered automation. Pre-initialisation of auction state before start time.
2. Only eligible bidders access the bidding screen. Mobile-responsive access enabled.

3. Bidders place bids until Auction End (including delta extensions, subject to maximum extension cap).
4. Auction ends when timer expires or Force Close is executed (with approval).

B. Bid Submission & Validation Rules

1. Bid must follow configured Bid Change Value (increment for Forward; decrement for Reverse).
2. Bid must improve current leading bid (higher for Forward, lower for Reverse).
3. System shall enforce configurable minimum bid threshold (floor) for Reverse auctions and maximum bid threshold (ceiling) for Forward auctions. Bids breaching thresholds rejected.
4. Same bidder cannot place consecutive bids without another bidder's valid bid in between.
5. On each bid, system validates: auction active, bidder eligible, bid adheres to rules, bid improves leading bid, bid within thresholds.
6. Duplicate bid: earliest valid timestamp prevails.
7. Concurrency: bids processed atomically (queue/atomic) to avoid race conditions.
8. Once submitted, a bid shall be irrevocable. The system shall not permit bid withdrawal or modification after submission. This irrevocability shall be communicated to bidders at the time of bid placement and documented in auction terms.
9. Rate limiting: the system shall enforce configurable maximum bids per minute per bidder to prevent bot-driven or automated bidding. Bids exceeding the rate limit shall be queued or rejected with appropriate notification.

C. Real-Time Display & Identity Masking

1. All bidders view: latest accepted bid value, date/time, remaining time (live countdown).
2. Bid updates in near real-time across all bidder screens.
3. Complete Bidder Identity Masking: system-generated, non-attributable reference IDs. No name, nickname, PAN fragment, username, or any identifiable attribute visible during live auction.

D. Delta Time & Auction Timing

1. Server-synchronised delta time auto-extension: timer resets to configured delta duration on valid bid before auction end.
2. One extension window at a time; multiple bids in same window do not stack. Each new valid bid resets timer.
3. Maximum Extension Cap: the system shall enforce a configurable maximum number of delta extensions (e.g., maximum 10 extensions) and/or a maximum total extended duration (e.g., maximum 4 additional hours) to prevent indefinite extension from last-second bidding loops. Once the cap is reached, the auction shall close at the end of the current extension window regardless of new bids.
4. If extension crosses cutoff time, auction continues to next calendar day seamlessly.
5. Timer shall be driven by an authoritative NTP-synchronised time source with certified precision. Client-side discrepancies shall not affect outcome. Consistent timer across all sessions.

E. System Crash & Failover Handling During Live Auction

1. The system shall implement comprehensive failover mechanisms for scenarios where the system becomes unresponsive or crashes during a live auction, particularly in the final seconds. Requirements include:
2. Automatic bid state persistence: every accepted bid shall be committed to durable storage in real time, ensuring zero bid data loss even in the event of a complete system failure.

3. Automatic recovery: upon system restoration, the auction shall resume from the exact state at the point of failure, with the timer adjusted to account for downtime. All connected bidders shall be notified of the interruption and resumed auction time.
4. If the system is unresponsive for more than a configurable threshold (e.g., 60 seconds) during the last 5 minutes of an auction, the system shall automatically extend the auction end time by a configurable duration (e.g., 15 minutes) upon recovery to ensure fairness.
5. Health monitoring: automated pre-auction health checks and continuous monitoring of all critical components (bidding engine, database, timer service, payment gateway, notification service) during live auctions. Alerts to Auctioning Authority on any degradation.

F. Auction Closure Conditions

1. Auction closes when timer expires with no further valid bids, or Force Close is executed (with approval).
2. On closure: no further bids accepted; system locks final bid state; moves to awarding.

6.3.8 Fraud Detection & Anti-Collusion Module

The system shall implement comprehensive fraud detection and anti-collusion controls to ensure the integrity of the auction process.

A. IP & Device Tracking

1. System shall log and track the IP address and device fingerprint of every bidder for each session and each bid placed.
2. Detection of multiple registered accounts operating from the same IP address or device. System shall flag such accounts and alert the Auctioning Authority.
3. Configurable threshold for same-IP/device activity that triggers automatic account suspension pending review.

B. Bid Pattern Analysis & Cartel Detection

1. System shall implement bid pattern analysis to detect suspicious bidding behaviour including: synchronised bidding (multiple bidders placing bids in coordinated patterns), bid suppression (bidders deliberately not competing), and round-tripping (bid values cycling in patterns suggesting coordination).
2. Analytics engine shall flag auctions where bidding patterns deviate significantly from expected competitive behaviour for review by the Auctioning Authority.
3. The system should evaluate feasibility of incorporating Machine Learning (ML) models for automated anomaly detection in bidding patterns, trained on historical auction data. The ML component may be implemented as a Phase 2 enhancement, but the data collection and pipeline architecture shall be designed to support it from Phase 1.

C. Rate Limiting & Bot Protection

1. Configurable rate limiting: maximum bids per minute per bidder (e.g., 5 bids/minute). Bids exceeding the limit queued or rejected.
2. CAPTCHA or equivalent challenge on login, registration, password reset, and upon detection of automated bidding behaviour.
3. API-level security: all exposed APIs shall implement authentication, authorisation, rate limiting, input validation, and protection against injection attacks, CSRF, and replay attacks.

6.3.9 Auction Monitoring & Control Module

1. Monitoring Dashboard: ongoing and upcoming auctions; live view with auction summary, current leading bid, active bidder count, time remaining, delta time status, and fraud/suspicious activity alerts.
2. Bid Tracking: complete bid history (value, timestamp, masked reference ID). Sort/filter. Read-only.
3. Force Close with Approval Workflow: initiator records mandatory reason; system routes to configured approver; approver approves or rejects; execution only upon approval; entire workflow in immutable audit trail.
4. Alerts & Exceptions: high-frequency activity, repeated invalid attempts, system issues, suspicious activity flags from fraud detection module, bid threshold breaches.
5. Audit Visibility: audit trail for all live-session actions.
6. Monitoring Reports: export bid history (CSV/Excel); auction summary; download logs.

6.3.10 Auction Closure & Awarding Module

A. Ranking Logic & Tie-Breaking

1. Forward: Highest bid → H1. Reverse: Lowest bid → L1. Ranking based on final accepted bids only.
2. Tie-Breaking: when multiple bidders quote the same H1/L1 value: (a) earliest valid timestamp ranked higher; (b) if identical, verifiable system-generated random selection; (c) entire logic and outcome in audit trail.

B. Price Justification

1. When enabled: Finalization Authority flags abnormal bids; bidder submits justification within timeline; authority accepts or rejects with remarks; if rejected, may proceed to next-ranked bidder (H2/L2).

C. Approval Workflow

1. Selected bidder sent for RBAC-based approval. Single-bidder: internal approval with remarks. All actions audited.

D. LOI Management & Final Award

1. LOI generated with auction reference, final bid value, award conditions. Communicated via notification.
2. On acceptance: auction marked Awarded; EMD refund for non-winners triggered. Status in reports/dashboards.

E. Award Reports

1. Auction result report, ranking report, LOI issuance report.

6.3.11 Payment Module

1. Payment Types: Auction Fee (non-refundable) and EMD (refundable).
2. Online Payment (mandatory): integrated gateway (net banking, UPI, debit/credit cards).
3. Offline Payment (optional): NEFT/RTGS or OTC; bidder uploads proof; manual verification.
4. Payment statuses: Initiated, Success, Failed, Pending, Verified (offline), Rejected (offline).
5. Retry & failure handling: multiple retries; unique tracking; duplicate prevention; delayed responses reconciled; excess amounts flagged for refund.

6. Payment Validation: validate against expected amount; ensure linkage to correct auction and bidder.
7. Reconciliation: transaction reports; Reconciler compares with gateway reports; identify mismatches. For offline payments, verify proofs.

Payment Dispute Handling & Escalation SLA

1. The system shall implement a formal payment dispute handling workflow. Bidders shall be able to raise payment disputes (e.g., amount deducted but payment status showing failed, double deduction) through the portal with supporting documentation.
2. Each dispute shall be assigned a unique tracking ID and routed to the Payment Reconciler with configurable SLA for acknowledgement (e.g., within 24 hours) and resolution (e.g., within 5 working days).
3. Escalation matrix: unresolved disputes shall automatically escalate to Auction Admin after the primary SLA expires, and further to a designated senior authority if still unresolved.
4. Bank Reconciliation API: the system shall integrate with bank reconciliation APIs to enable automated matching of system payment records against actual bank settlement records, reducing manual reconciliation effort and improving audit trail completeness for offline payments.
5. Payment Reports: transaction report, failed/pending report, dispute status report, reconciliation summary.

6.3.12 Refund Management Module

1. Refund triggers: post-award (non-winners), post-evaluation rejection, auction cancellation.
2. Refund mode: Automatic or Manual, as per configuration.
3. Online refund: to original payment method via gateway. Offline refund: processed outside system; Reconciler records details.
4. System does not store bidder bank account details. Refund traceable with transaction reference.
5. Statuses: Initiated, Processing, Success, Failed. Bidder views status in portal; Reconciler manages all records.
6. Failure handling: failed refunds marked; Reconciler notified; retry (online) or manual reprocessing (offline).

Refund Escalation SLA & Offline Refund Scalability

1. The system shall enforce configurable refund SLAs: e.g., online refund initiation within 3 working days of trigger event; completion within 7 working days. The SLA shall be visible to bidders.
2. Failed Refund Escalation: if a refund fails after the configured maximum retry attempts, the system shall automatically escalate to the Auction Admin and generate a pending exception report. Escalation SLA (e.g., resolution within 5 working days of escalation) shall be tracked and reported.
3. For offline refunds: the system shall provide a structured workflow to capture refund execution details (bank reference number, date, amount, executing officer) to maintain audit trail completeness. The system shall generate offline refund instruction sheets with pre-populated bidder and amount details to streamline manual processing at scale.
4. Refund Reports: status report, summary by auction, pending refunds report, SLA compliance report, escalation report.

6.3.13 Notification & Communication Module

1. Auction Notifications: published, schedule updates, amendment alerts.
2. Participation Notifications: submission confirmation, payment success/failure.

3. Evaluation Notifications: clarification request, response received, qualification/rejection, scoring summary (for Prequalified).
4. Bidding Notifications: auction start reminder, auction end reminder, bid threshold breach, system interruption/recovery notices.
5. Award Notifications: LOI issued, result (win/loss), price justification request.
6. Financial Notifications: refund initiated, refund completed, payment dispute status updates.
7. Control Notifications: Force Close request, approval/rejection.
8. Fraud Alerts: suspicious activity notifications to Auctioning Authority and Auction Admin.
9. Channels: Email (mandatory), SMS (optional). Templates configurable with dynamic placeholders. Notifications in near real-time; failed notifications retried.

6.3.14 Audit & Logging Module

A. Audit Scope

Logging shall cover all modules: registration, authentication, auction lifecycle, participation, payment, evaluation (including scoring), bidding, monitoring, control, closure, awarding, refund, fraud detection, configuration changes, and system events.

B. Tamper-Proof & Legally Timestamped Logging

1. All audit logs shall be stored using an immutable storage mechanism. The system shall implement cryptographic chaining (hash-chain) of audit records where each log entry includes a cryptographic hash of the previous entry, ensuring that any tampering is immediately detectable.
2. The system shall evaluate and, if feasible, implement blockchain-based or distributed ledger-based immutable storage for critical audit records (bids, approvals, awards, financial transactions) as an additional layer of tamper-proofing.
3. Every bid shall be legally timestamped using an authoritative, NTP-synchronised time source with certified precision (e.g., IST from NIC/ERTL time servers or equivalent certified time service). The timestamp shall be recorded with millisecond precision and shall be independently verifiable.
4. Audit logs shall not be modifiable or deletable by any user role, including Super Admin. Administrative access to audit logs shall be strictly read-only. No database-level access shall permit alteration of audit records.
5. The system shall provide cryptographic proof of audit log integrity on demand, enabling authorised auditors to independently verify that no records have been altered since creation.

C. Logged Events

1. User actions: registration, login/logout, password reset, KYC/PAN verification results.
2. Auction actions: creation, update, submission, approval/rejection, publication, auto-start events, bulk operations.
3. Participation & Payment: submission, initiation, completion, offline verification, disputes, escalations.
4. Evaluation: document review, clarification, qualification/rejection, scoring details and evaluator-level scores.
5. Bidding: each bid (value, legally-timestamped, reference ID, IP address, device fingerprint), invalid attempts, threshold breaches, rate limit triggers.
6. Control: Force Close initiation, approval/rejection, execution (with reason).
7. Awarding: ranking, tie-breaking details, price justification, approval decisions, LOI issuance.
8. Financial: refund initiation, completion, failures, retries, dispute handling, escalations.

9. Fraud: IP/device tracking events, suspicious activity flags, cartel detection alerts.
10. Configuration: all master configuration changes.

D. Audit Trail Requirements

1. Each record: User ID/Role, action, module/entity, legally-certified timestamp, previous/updated values, remarks, IP address.
2. Logs immutable, securely stored, retrievable, searchable, filterable.
3. Access restricted to authorised roles. Read-only for all roles including Super Admin.

E. Audit Reports

1. User activity report, action-wise audit report, configuration change report, fraud detection report, bid integrity verification report.

6.3.15 Security Requirements

A. Access Control

1. RBAC enforcement for all modules and actions.
2. Session-based authentication. Unauthorised access blocked and logged.
3. Session hijacking prevention through secure cookie attributes, token rotation, and IP/device binding.

B. Data Protection

1. Sensitive data (PAN, credentials) protected; passwords never stored in plain text.
2. Bidder identity completely masked during live auction.
3. Financial data not stored beyond required references. Bidders cannot access other bidders' data.
4. Encryption standards: AES-256 for data at rest; TLS 1.3 for data in transit.

C. Advanced Security Controls

1. Rate limiting on all public-facing endpoints to prevent bot-driven attacks and automated bidding.
2. CAPTCHA/bot protection on login, registration, password reset, and upon detection of automated behaviour.
3. API security (if APIs are exposed): authentication (OAuth 2.0/JWT), authorisation, rate limiting, input validation, protection against SQL injection, XSS, CSRF, and replay attacks.
4. Regular security assessments: VAPT before go-live and at least annually thereafter.
5. STQC certification or equivalent, if required by BDA.
6. Compliance with OWASP Top 10 security standards.

D. Operational Controls

1. All critical actions require authentication and are auditable.
2. System prevents duplicate or unauthorised actions.
3. Time-based controls strictly enforced. Display consistency with actual system state.
4. Force Close subject to mandatory approval workflow.

E. Data Privacy & DPDP Act Compliance

1. User data collected only for defined purposes; consent during registration.
2. Data used only for system operations; protected from unauthorised access.
3. Sensitive data access restricted by roles and audited.

4. Data not shared with external parties except for payment processing or legal compliance.

6.4 Legal & Dispute Resolution Framework

The system shall incorporate provisions to ensure the legal validity, defensibility, and enforceability of all auction proceedings conducted through the platform.

6.4.1 Bid Irrevocability

1. All bids submitted through the system shall be irrevocable. Once a bid is placed and accepted by the system, the bidder shall not be permitted to withdraw or modify the bid.
2. The bid irrevocability condition shall be prominently communicated to the bidder at the time of bid placement through an explicit acknowledgement/consent mechanism.
3. The auction terms and conditions (configurable per auction) shall include legally enforceable bid irrevocability clauses.

6.4.2 Legal Validity of Electronic Records

1. All auction records, bids, approvals, and communications generated by the system shall comply with the requirements of the Information Technology Act, 2000 (as amended) for legal validity of electronic records.
2. Bids shall be legally timestamped using an authoritative, certified time source (NTP-synchronised with NIC/ERTL or equivalent). The timestamp shall constitute prima facie evidence of the time of bid submission.
3. Digital signatures (DSC) applied through the system shall comply with Section 5 of the IT Act for legal recognition.
4. Audit logs shall be maintained in a manner that satisfies the evidentiary requirements under the Indian Evidence Act, 1872 (Section 65B) for electronic evidence, including certification of electronic records.

6.4.3 Dispute Handling

1. The system shall provide a formal dispute submission mechanism where bidders can raise disputes related to auction conduct, bid acceptance/rejection, payment, or award decisions.
2. Each dispute shall be tracked with a unique ID, assigned to the appropriate authority based on dispute type, and resolved within configurable SLA timelines.
3. The system shall generate comprehensive dispute investigation reports including full audit trail, bid history, payment records, and evaluation details for the disputed auction.
4. The system shall maintain immutable records of all disputes, resolutions, and related communications for legal and RTI compliance.

6.4.4 SLA & Penalty Framework

1. The contract shall define Service Level Agreements (SLAs) for system availability, response times, issue resolution, payment processing, and refund completion.
2. A penalty clause framework shall be defined for SLA breaches, covering: system downtime during live auctions, data loss incidents, security breaches, and failure to meet resolution SLAs.
3. SLA compliance shall be tracked and reported through automated dashboards with monthly/quarterly compliance reports.

6.5 System Integrations

Integration	Scope	Controls / Notes
Payment Gateway	Integration with one or more payment gateways for online payment initiation, status verification, and refund processing.	Transactions securely transmitted; gateway response validated.
Bank Reconciliation API	Automated reconciliation of system payment records against actual bank settlement records to reduce manual effort and improve audit completeness.	Configurable reconciliation frequency; discrepancy alerts to Reconciler.
Notification Gateway	Email service (mandatory) and SMS service (optional) for transactional notifications.	Near real-time delivery; retry failed notifications.
Digital Signature (DSC)	DSC provider integration for authentication and digital signing of critical actions.	As per configured applicability; all signed actions logged.
KYC/PAN Verification API	Real-time PAN verification through authorised API (NSDL/UTIITSL) to validate PAN authenticity, active status, and name match.	Verification mandatory during registration; results logged.
BDA Layout Information System	Integration to validate that only qualified and undisputed properties are eligible for auction. Property status check before auction notice submission.	Validation rules configurable; rejection with reason if property ineligible.
Authoritative Time Source (NTP)	Integration with certified NTP time servers (e.g., NIC/ERTL or equivalent) for legally valid, precision-certified timestamps for all bids and system events.	Millisecond precision; time drift monitoring; alerts on synchronisation failure.
State Data Centre (SDC)	Deployment and hosting on Government of Karnataka SDC or BDA-specified infrastructure.	Compliance with SDC security and access policies.

Note: There may be additional integration requirements with BDA's internal systems that are not fully identified at this stage. The Bidder shall conduct a comprehensive integration study during the SRS phase to identify and plan for all necessary system integrations.

6.6 Non-Functional Requirements

6.6.1 Performance & Scalability

1. The live bidding engine shall support a minimum of 500 concurrent bidders per auction with sub-second bid processing latency.
2. Real-time bid display updates shall reach all connected screens within 2 seconds.
3. The system shall support at least 50 concurrent live auctions without degradation.
4. Page load times shall not exceed 3 seconds under normal load.
5. Timer synchronisation accuracy: maximum drift of ±1 second from the authoritative NTP server across all sessions.
6. Bid processing throughput: the system shall handle a minimum of 100 bids per second across all concurrent auctions without data loss or sequencing errors.

7. Stress test scenario: the system shall demonstrate capability to handle a peak scenario of 250 bidders submitting bids in the last 10 seconds of an auction without any bid loss, timer inaccuracy, or system degradation. The Bidder shall conduct and document this stress test before go-live.
8. The Bidder shall conduct a capacity planning study based on historical BDA auction data (past 5 years, if available from KPPP) to size infrastructure appropriately.

6.6.2 Load Balancing, Scaling & Peak Usage Handling

1. The system shall implement horizontal scaling with load balancing to distribute bidding traffic across multiple application server instances.
2. Auto-scaling: the system shall support automated scaling of compute resources during peak auction periods based on configurable thresholds (CPU utilisation, connection count, bid queue depth).
3. Single Point of Failure elimination: no component in the bidding path (application server, database, timer service, WebSocket/event service) shall constitute a single point of failure. Each critical component shall have active-active or active-passive redundancy.
4. Database connection pooling, query optimisation, and caching strategies shall be implemented to maintain performance under peak load.
5. Load testing: the Bidder shall conduct comprehensive load testing simulating peak concurrent users and bid volumes, and provide documented results before UAT sign-off.

6.6.3 Availability & Reliability

1. System availability of 99.5% or higher during operational hours.
2. No data loss during system failure in live auctions; automatic recovery and bid state restoration.
3. Scheduled maintenance windows shall not coincide with live auction periods.
4. Automated pre-auction health checks before each scheduled auction start.
5. Continuous health monitoring of all critical components during live auctions with automated alerting.

6.6.4 Security Standards

1. All data in transit encrypted using TLS 1.3.
2. All sensitive data at rest encrypted using AES-256.
3. VAPT before go-live and at least annually thereafter.
4. Compliance with OWASP Top 10.
5. STQC certification or equivalent, if required by BDA.

6.6.5 Browser & Device Compatibility

1. Compatible with latest Chrome, Firefox, Edge, and Safari.
2. Mobile-responsive design for bidder-facing screens and live bidding.
3. Functional on Android and iOS mobile browsers.

6.6.6 Backup & Disaster Recovery

1. Automated daily backups of database and application files.
2. RPO: not exceeding 1 hour. RTO: not exceeding 4 hours.
3. DR setup as per BDA/SDC infrastructure policies.

4. For live auction data: RPO of zero (real-time replication to secondary node) to ensure no bid data loss.

6.6.7 Multi-Tenancy

1. The system shall be designed with a multi-tenancy architecture enabling, if required by BDA, other Government organisations to use the platform for their own auctions.
2. Tenant-level data isolation shall be strictly enforced: each tenant's data (users, catalogues, auctions, payments, audit logs) shall be completely segregated.
3. Tenant-specific branding (logo, colour scheme), configuration, and administrative control shall be supported.
4. Shared infrastructure resources (compute, storage) shall be allocated with configurable quotas per tenant.

6.7 Data Migration & Transition

1. Historical auction records (notices, schedules, results) for reference and continuity.
2. Registered bidder data (subject to data quality assessment and de-duplication).
3. Property catalogue/master data currently maintained by BDA departments.
4. Data Migration Plan: source-target mapping, validation rules, rollback strategy, and sign-off process.
5. Migration completed and validated before go-live.

6.8 Training & Capacity Building

1. Administrator Training: configuration, user management, master data, reports, tenant management.
2. Operational Training: auction creation, approval, publication, bulk operations, monitoring, force close, awarding.
3. Evaluator Training: document review, scoring-based evaluation, clarification, conflict resolution.
4. Reconciler Training: payment verification, reconciliation, refund processing, dispute handling, escalation workflows.
5. Bidder Orientation: registration, KYC verification, auction discovery, participation, payment, live bidding, refund tracking.
6. Training with hands-on sessions in dedicated sandbox environment.
7. User manuals, quick-reference guides, and video tutorials for each role.
8. Minimum two rounds: during UAT and before go-live.

6.9 Warranty & Post-Deployment Support

1. Warranty: minimum one (1) year from Go-Live; bug fixes, security patches, performance optimisations at no additional cost.
2. Dedicated support team with SLA-bound response and resolution times.
3. Severity-based SLA: Critical (system down, auction disruption) – 4 hours; High – 8 hours; Medium/Low – per agreed timelines.
4. Defined penalty clauses for SLA breaches during warranty period, covering: system downtime during live auctions, data loss, security breaches, and resolution SLA failures. Penalty structure (percentage of contract value or fixed amount per incident) to be agreed in the contract.
5. Periodic system health reports: performance metrics, error logs, usage statistics, SLA compliance.
6. Post-warranty AMC terms proposed as separate commercial component.

6.10 Summary of Key Deliverables

Sl.	Deliverable	Phase	Type
1	System Requirement Specification (SRS)	Design Phase	Document
2	UI/UX Design & Wireframes	Design Phase	Document / Prototype
3	Capacity Planning Study (based on historical data)	Design Phase	Document
4	E-Auction Application (All Modules incl. Fraud Detection)	Development Phase	Software
5	Database Design & Schema	Development Phase	Document / Script
6	API Documentation	Development Phase	Document
7	Integration: Payment Gateway	Development Phase	Software
8	Integration: Notification Gateway	Development Phase	Software
9	Integration: DSC Provider	Development Phase	Software
10	Integration: KYC/PAN Verification API	Development Phase	Software
11	Integration: BDA Layout Information System	Development Phase	Software
12	Integration: Bank Reconciliation API	Development Phase	Software
13	Integration: Authoritative NTP Time Source	Development Phase	Software
14	Unit & Integration Test Reports	Testing Phase	Document
15	Load & Stress Test Reports (incl. 250-bidder scenario)	Testing Phase	Document
16	User Acceptance Testing (UAT) Support	Testing Phase	Service
17	VAPT / Security Audit Report	Pre-Go-Live	Document
18	Data Migration Plan & Execution	Pre-Go-Live	Document / Service
19	Production Deployment	Go-Live	Service
20	User Manuals & Training Material	Training Phase	Document / Media
21	Training Sessions (Role-wise)	Training Phase	Service
22	Source Code & Documentation Handover	Project Closure	Deliverable
23	Warranty Support (1 Year) with SLA & Penalties	Post Go-Live	Service

6.11 General Conditions Applicable to Scope

1. All intellectual property rights in the developed E-Auction system shall vest with BDA upon final acceptance and payment.
2. The Bidder shall hand over complete source code, database scripts, configuration files, and technical documentation upon project completion.
3. The system shall be deployed on infrastructure specified by BDA (Government SDC or BDA server infrastructure).
4. The Bidder shall comply with all applicable Government of Karnataka IT policies, security guidelines, and procurement regulations.
5. Any deviation from the scope described herein shall require prior written approval from BDA's competent authority.
6. The Bidder shall ensure no third-party proprietary components are used without appropriate licensing; all open-source components clearly disclosed.
7. The Bidder shall provide escrow arrangements for source code if required by BDA.
8. This scope shall be read in conjunction with the Functional Requirement Specification (FRS) for the Auction Management System.
9. The system architecture shall support future enhancements including ML-based fraud detection, advanced analytics, and integration with additional Government systems without major re-architecture.
10. The Bidder shall disclose the complete technology stack, third-party dependencies, and their respective licences as part of the SRS deliverable.

17. PROJECT GOVERNANCE AND APPROVALS

This Scope of Work document establishes the complete and binding agreement regarding project scope, deliverables, timeline, and responsibilities. The document shall be deemed approved and binding upon receipt of written acceptance from both BDA and the Service Provider.

Document **Version:** 1.0

Date: _____, 2026

SIGN-OFF SECTION

Prepared By (Service Provider)

Company Name: _____

Authorized Signatory: _____

Name and Title: _____

Date: _____

Digital Signature: _____

Reviewed and Approved By (BDA)

Authorized Official: _____

Name and Title: _____

Date: _____

Official Seal: _____

Appendix – I - Format for Letter of Proposal

The Commissioner,
Bangalore Development Authority.
T. Chowdaiah Road, Kumara Krupa West
Bangalore - 560020

Dear Sir,

Sub: Proposal for Design, Development, and Implementation of End-to-End E-Auction Management System with Real-Time Bidding Engine, Fraud Detection, Integrated Payment & Refund Management, and Tamper-Proof Audit Framework for Bangalore Development Authority (BDA)

1 With reference to your Tender Document, I/We, having examined the Bidding/proposal Documents and understood their contents, hereby submit my/our Proposal for the aforesaid Project. The Proposal is unconditional and unqualified.

2 All information provided in the Proposal and in the Appendices, are true and correct.

3 This statement is made for the express purpose of qualifying as a Service Provider for the successful execution of the Event.

4 I/We shall make available to the BDA any additional information it may find necessary or require to supplement or authenticate the Bid.

5 I/We acknowledge the right of the BDA to reject our Proposal without assigning any reason or otherwise and hereby waive my/our right to challenge the same on any account whatsoever.

6 I/We certify that in the last three years, I/We have not been blacklisted/suspended/barred.

7 I/ We declare that:

(a) I/We have examined and have no reservations to the Bidding/proposal Documents, including any Addendum issued by the BDA.
(b) I/We do not have any conflict of interest.

8 I/We understand that you may cancel the Bidding Process at any time and that you are neither bound to accept any Proposal that you may receive nor to invite the IT Consultancy to bid for the Project, without incurring any liability to the Bidders, in accordance with **Clause-2.4** of the Tender Document.

9 I/We further certify that in regard to matters relating to security and integrity of the country. I/We have not been blacklisted by any Agency of the Government for any offence committed by us.

10 I/We understand that in case the Selected Service Provider is a foreign company, the

continued eligibility shall be subject to approval of the BDA from national security and public interest perspective. The decision of the BDA in this behalf shall be final and conclusive and binding on the Service Provider.

11 I/We hereby irrevocably waive any right which we may have at any stage at law or howsoever otherwise arising to challenge or question any decision taken by the BDA in connection with the selection of the Service Provider, or in connection with the Bidding Process itself, in respect of the above-mentioned Event and the terms and implementation thereof.

12 I/We declare that, we have gone through the draft Service Contract provided in the Tender Document. In the event of my/our being declared as the Selected Service Provider, I/We agree to enter in to the Service Contract as per mutual agreed terms and conditions.

13 I/We understand that except to the extent as expressly set forth in the Service Contract, I/We shall have no claim, right or title arising out of any documents or information provided to me/us by the BDA or in respect of any matter arising out of or concerning or relating to the Bidding Process including the award of Right

14 The service fee has been quoted by me/us in the financial proposal after taking into consideration all the terms and conditions stated in the Tender Document, draft Services level agreement/Contract, my/our own estimates of costs and revenues and after a careful assessment of the portal and all the conditions that may affect the Proposal.

15 I/We have remitted an amount of Rs.2,00,000 (Rupees Two Lakhs only) towards EMD in accordance with the Tender Document.

16 I/We offer a Performance Security of 5%, in case we are selected in accordance with the Tender Document.

17 I/We agree and understand that the Proposal is subject to the provisions of the Bidding/proposal Documents. In no case, I/We shall have any claim or right of whatsoever nature if the Event/ Right is not awarded to me/us or our Proposal is not opened

18 *I*/We agree to keep this offer valid for 90 days from the Bid Due Date specified in the Tender Document.

19 I/We agree and undertake to abide by all the terms and conditions of the Tender Document.

In witness thereof, I/we submit this Proposal under and in accordance with the terms of the Tender Document.

Date : Yours faithfully,
Place : Signature of the Authorized signatory

(Name and designation
of the Authorized signatory)
Name and seal of Bidder/Service Provider

Annexure – 1 of Appendix – I

Details of the Bidder and their Technical Capability

1 Details of Bidder

a) Name of the Bidder / Firm:
b) Address of the Office:
c) Year of commencement of business:
d) Registration Number and Details:
e) PAN Number & Details:
f) GST Registration Details:

Documentary evidence for 1 (a) to (f) to be enclosed.

2 Details of contact person for communication

a) Name:
b) Designation:
c) Telephone Number (land line):
d) Mobile No.:
e) E-Mail Address:

3 Experience in E-Auction module/E-procurement module, web design, ERP system from the last five years:

Sl. No.	Details of Project and location	Sponsor / Client	No. of Client locations	Year of Commencement and Contract Period	Broad scope of work
1					
2					
3					

Note:

1. Provide details for maximum number of assignments (as per the above Table), as the number and nature of assignments undertaken will be considered at the time of technical evaluation
2. Documentary proof such as Work Order/ Completion Certificate issued by the Client shall be provided for all the assignments listed above

4 Details of Key Personnel to be involved in the Project:

Sl. No.	Name	Qualification	Area of expertise
1			
2			
3			

Other Details

	Details Required	Enclosed(Yes/No)	Remark
4	Details of ISO 27001 Certificate:		
5	ISO 9001and CMMi		
6	Number and details of full time IT Professionals on the direct pay roll		
7	Any other details in support of capability of the Bidder		
8	Project plan for execution with the technical details of the Proposed solution must be submitted by the Bidder		

Annexure – 2 of Appendix-I - Financial Capacity of the Bidder

Turn over during last three financial year **(FY:2022-23, 2023-24 & 2024-25)**

Sl. No.	Financial Year	Annual Turnover (Rs. in lakhs)	Networth (Rs. in lakhs)
1	2022-23		
2	2023-24		
3	2024-25		
	Total		
	Average Annual Turnover		

Certificate from the Statutory Auditor

This is to certify that ..... (Name of the Bidder) has registered an annual turnover shown above against the respective years.

(Signature, Name and Designation of the CA)

Date: Name and Seal of the Audit Firm

Net worth from past three financial years

Sl. No.	Financial Year	Annual Turnover (Rs. in lakhs)	Net Worth (Rs. in lakhs)
1	2022-23		
2	2023-24		
3	2024-25		

Certificate from the Statutory Auditor

This is to certify that ..... (Name of the Bidder) has registered an annual turnover shown above against the respective years.

Further, net worth of the company as on 31.12.2025was Rs. _____.

(Signature, Name and Designation of the authorized signatory)

Date: Name and Seal of the Audit Firm

Appendix – II - Power of Attorney for signing of Proposal

Know all men by these presents, we, _____ (name of the firm and address of the registered office) do hereby irrevocably constitute, nominate, appoint and authorize Mr. / Ms. _____(Name), son/daughter/wife of _____ and presently residing at_____, who is [presently employed with us and holding the position of _____], as our true and lawful attorney (hereinafter referred to as the "Attorney") to do in our name and on our behalf, all such acts, deeds and things as are necessary or required in connection with or incidental to submission of our Proposal for the "The scope of work broadly covers for Software development for ETC's, commissioning and maintenance of data centre & by the Bidder for a period of Five years including but not limited to signing and submission of all applications, bids and other documents and writings, participate in Bidders' and other conferences and providing information / responses to the BDA, representing us in all matters before the BDA, signing and execution of all contracts including the Service Contract and undertakings consequent to acceptance of our Bid, and generally dealing with the BDA in all matters in connection with or relating to or arising out of our Proposal for the said Project and/or upon award thereof to us and/or till the entering into of the Service Contract with the BDA.

AND we hereby agree to ratify and confirm and do hereby ratify and confirm all acts, deeds and things lawfully done or caused to be done by our said Attorney pursuant to and in exercise of the powers conferred by this Power of Attorney and that all acts, deeds and things done by our said Attorney in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us.

IN WITNESS WHEREOF WE, _____, THE ABOVE-NAMED PRINCIPAL HAVE EXECUTED THIS POWER OF ATTORNEY ON THIS _____DAY OF _____, 2023.

For_____

(Signature)
(Name, Title and Address)

Witnesses:
1
2

Accepted [Notarized]

(Signature)
(Name, Title and Address of the Attorney)

Notes:

- *The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executants (s) and when it is so required, the same should be under common seal affixed in accordance with the required procedure.*
- *Also, wherever required, the Bidder should submit for verification the extract of the charter documents and documents such as a resolution/power of attorney in favour of the person executing this Power of Attorney for the delegation of power hereunder on behalf of the Bidder.*

- *For a Power of Attorney executed and issued overseas, the document will also have to be legalized by the Indian Embassy and notarized in the jurisdiction where the Power of Attorney is being issued.*

Appendix – III - Format for Bank Guarantee for Performance Security

From:

To:
The Commissioner,
Bangalore Development Authority.
T. Chowdaiah Road, Kumara Krupa West
Bangalore – 560020

Dear Sir,

Whereas you have issued Letter of Award dated……to M/s……., here in after referred to as the "Service Provider" for software design, Develop and implementation and propose to execute a Service Contract with the said Service Provider who is required to produce a bank guarantee for 5% to secure its obligations to the BDA.

1. We the Bank…… hereby expressly, irrevocably and unreservedly undertake and guarantee as principal obligors on behalf of the Service Provider that, if the BDA declares to us that the services have not been provided according to the Contractual obligations under the contract, we will pay you, on demand and without demur, all and any sum to a maximum of 5%. Your written demand shall be conclusive evidence to us that such repayment is due under the terms of the said contract. We undertake to effect payment upon receipt of such written demand.
2. We shall not be discharged or released from this undertaking and guarantee by any arrangements, variations made between you and the Service Provider, indulgence to the Service Provider by you, or by any alterations in the obligations of the Contractor or by any forbearance whether as to payment upon receipt of such written demand.
3. In no case shall the amount of this guarantee be increased.
4. This guarantee shall remain valid till the date of completing the contractual obligations under the said Contract.
5. Unless a demand or claim under this guarantee is made on us in writing or on/before the aforesaid expiry date as provided in the above referred Contract or unless this guarantee is extended by us, all your rights under this guarantee shall be forfeited and we shall be discharged from the liabilities hereunder.
6. This guarantee shall be a continuing guarantee and shall not be discharged by and change in the constitution of the Bank or in the constitution of ……

Bank Seal

Authorized Signature
From the Bank

Appendix – IV - Specimen of Financial Proposal

(This is only for reference. IT Consultancy are requested to enter the Financial Proposal amount in the relevant slot provided in e-portal only.)

Date:_____

The Commissioner,
Bangalore Development Authority.
T. Chowdaiah Road, Kumara Krupa West
Bangalore – 560020

Sir,

Sub.: Financial Proposal for Design, Development, and Implementation of End-to-End E-Auction Management System with Real-Time Bidding Engine, Fraud Detection, Integrated Payment & Refund Management, and Tamper-Proof Audit Framework for Bangalore Development Authority (BDA).

We hereby submit our Financial Proposal of Rs._____ (Rupees_____only) .

Sl. No	Activity	Cost	Remark
1	Design, Development, and Implementation of End-to-End E-Auction Management System with Real-Time Bidding Engine, Fraud Detection, Integrated Payment & Refund Management, and Tamper-Proof Audit Framework for Bangalore Development Authority (BDA).		
2	Maintenance for 3 Years		
3	Taxes levied- GST and other taxes [Specify the GST % and HSN (Harmonized System of Nomenclature) code] *		
4	Total cost- Per Certificate		

(* % of GST will be applicable as per the slab of the supply period)

We have reviewed all the terms and conditions of the Tender Document and undertake to abide by all the terms and conditions contained therein. We hereby declare that there are, and shall be no deviations from the stated terms in the Tender Document.

Yours faithfully,
For and on behalf of ..... (Name of the Service Provider)
(Signature of Authorized Signatory) _____ (Name and designation of the Authorized Person)

Service Contract (Draft)

The scope of work broadly covers Design, Development, and Implementation of an End-to-End E-Auction Management System with Real-Time Bidding Engine, Fraud Detection, Integrated Payment & Refund Management, and a Tamper-Proof Audit Framework for Bangalore Development Authority (BDA).

This AGREEMENT (hereinafter called the "**Agreement**") is made on the _____ day of the month of _____ 2025, between, on the one hand, Commissioner For Bangalore Development Authority, (hereinafter called the "**BDA**" which expression shall include their respective successors and permitted assigns, unless the context otherwise requires) having its office at T. Chowdaiah Road, Kumara Krupa West, Bangalore – 560020and on the other hand, _____ (hereinafter called the "**Service Provider**" which expression shall include their respective successors and permitted assigns).

WHEREAS

The BDA vide its Notification dated……sought proposals from interested IT Consultancy for Design, Develop and Implementation of Grievance Management Portal for BDA here in after called the "**Project**");

(A) the Service Provider submitted its proposal for the aforesaid Project, whereby the Service Provider represented to **the BDA** that it had the required professional skills, and in the said proposal the Service Provider also agreed to provide the Services to the BDA on the terms and conditions as set forth in the Tender Document (Tender Document) and this Agreement; and

(B) the BDA, on acceptance of the aforesaid proposal of the Service Provider, awarded the Project to the Service Provider vide its Letter of Award dated _____ (the "**LoA**"); and

(C) In pursuance of the LoA, the Service Provider has submitted a Performance Bank Guarantee for 5% in favour of the BDA.

NOW, THEREFORE, the parties hereto hereby agree as follows:

1. Definitions and Interpretation

1.1 Definitions

In this Agreement, the words and expressions defined below shall have the meanings assigned to them respectively, except where the context requires otherwise:

"Agreement" shall mean this agreement including schedules hereto as the date hereof and includes any amendment hereto made in accordance with the provisions hereof.

"Affected Party" shall mean the Party claiming to be affected by a Force Majeure Event in accordance with Clause 11.

"Applicable Law" shall mean all laws in force and effect, as of the date hereof, and which may be promulgated or brought into force and effect hereinafter in India including judgements, decrees, injunctions, writs of orders of any court of record as may be in force

and effect during the subsistence of this Agreement and applicable to the Project /the Service Provider.

"Applicable Permits" shall mean all clearances, permits, authorizations, consents and approvals required to be obtained or maintained by the Service Provider under Applicable Law, in connection with the Project during the subsistence of this Agreement.

"Appointed Date" shall mean the date of the service Agreement.

"Arbitration Act" shall mean the Arbitration and Conciliation Act, 1996 and shall include any amendment to or any re-enactment thereof as in force from time to time.

"BDA" means the Bangalore Development Authority.

"Change of Scope" shall have the meaning ascribed thereto in Clause 5.

"Completion Certificate" shall mean the certificate to be issued by the BDA pursuant to Clause 3.4.

"Completion Date" or "COD" shall mean the date on which Completion Certificate is issued by the BDA / its nominee.

"Encumbrance" shall mean any encumbrance such as mortgage, charge, pledge, lien, hypothecation, security interest, assignment, privilege or priority of any kind having the effect of security or other such obligations and shall include without limitation any designation of loss payees or beneficiaries or any similar arrangement under any insurance policy pertaining to the Project, physical encumbrances, claims for any amounts due on account of taxes, cesses, electricity, water and other utility charges and encroachments on the Project Facility.

"Expiry "shall mean expiry of the Agreement upon completion of Agreement Period in terms of Clause 2.2 hereof.

"Expiry Date" means the date on which Expiry occurs.

"Force Majeure" or Force Majeure Event" shall have the meaning ascribe thereto in Clause 11.

"Good Industry Practice" means the exercise of that degree of skill, diligence, prudence and foresight in compliance with the undertakings and obligations under this Agreement which would reasonably and ordinarily be expected from a skilled and experienced person engaged in the implementation, operation and maintenance or supervision or monitoring thereof or any of them of a project of the type similar to that of the Project.

"Installation Plan" shall mean the plan relating to installation of Project finalized in accordance with Clause 3.2.

"Intellectual Property Rights" shall mean and include all rights in the providing of services by the Service Provider. improvements, upgradations, enhancements, modified versions that may be made from time to time, data base generated and compilations made.

"Lenders" shall mean financial institutions, banks, non –banking finance companies, private companies, funds and trustees for bond holders or debenture holders, who provide funds to the Service Provider for implementing the Project.

"Material Adverse Effect" shall mean a material adverse effect on (a) the ability of the Parties to exercise any of its rights or perform / discharge any of its duties obligations under and in accordance with the provisions of this Agreement and / or (b) the legality, validity, binding nature or enforceability of this Agreement.

"Material Breach" shall mean a breach by either Party of any its obligations under this Agreement which has or is likely to have a Material Adverse Effect on the Project and which such Party shall have failed to cure.

"Parties" shall mean the parties to this Agreement and "Party" shall mean either of them, as the context may admit or require.

"Performance Security" shall mean the guarantee for performance of its obligations, to be furnished by the Service Provider in accordance with Clause 3.1 from Nationalized or Private bank.

"Person" shall mean (unless) otherwise specified or required by the context), any individual, BDA, corporation, partnership, joint venture, trust, unincorporated organization, government or government Service Provider or any other legal entity.

"Project" shall mean the Design, Develop and Implementation of Grievance Management Portal for BDA.

"Project Facilities" shall mean & include the facilities provided in Schedule 1.

"Rupees" or "Rs." refers to the lawful currency of the Republic of India.

"Termination" shall mean early termination of the Agreement by either Party, pursuant to Termination Notice or otherwise in accordance with the provisions of this Agreement but shall not, unless the context otherwise requires, include Expiry.

"Termination Date" shall mean the date specified in the Termination Notice as the Date on which Termination occurs.

"Termination Notice" shall mean the notice of Termination by either Party to the other Party, in accordance with the applicable provisions of this Agreement.

"User Manual" shall mean information booklets, operation manual, installation certificate, manufacturers' warranties and guarantees, service contrasts and any other document, certificate, bills, invoices relating to procurement, installation and maintenance of Project Facilities.

1.2 Interpretation

In this Agreement, unless the context otherwise requires,

a. Any reference to a statutory provision shall include such provision as is from time to time modified or re-enacted or consolidated so far as such modification or re-enactments or consolidation applies to, or is capable of being applied to any

transaction entered into hereunder.

b. References to Applicable Law shall include the laws, acts, ordinances, rules, regulations, notifications, guidelines or bylaws which have the force of law;
c. The words importing singular shall include plural and vice versa, and words denoting natural persons shall include partnerships, firms, companies, corporations, joint ventures, trusts, associates, organizations or other entities (whether or not having as separate legal entity)
d. The heading is for convenience of reference only and shall not be used in, and shall not affect, the construction or interpretation of this Agreement;
e. The words "include" and "including" are to be constructed without limitations;
f. Any reference to day shall mean a reference to a calendar day
g. Any reference to month shall mean calendar month for the purposes of this Agreement
h. The Schedules to this Agreement form an integral part of this Agreement as though they were expressly set out in the body of this Agreement. In case of any discrepancy between the Schedule and the body of the Agreement, the latter shall prevail.
i. Any reference at any time to any agreement, deed, instrument, license or document of any description shall be constructed as reference to that agreement, deed, instrument, license or other document as amended, varied, supplemented, modified or suspended at the time of such reference;
j. Reference to recitals, clauses, sub-clauses or Schedules in this Agreement shall, except where the context otherwise requires, be deemed to be reference to recitals, Clauses, sub clauses and Schedules of or to this Agreement;
k. Any agreement, consent, approval, authorization, notice, communication, information or report requires under or pursuant to this Agreement from or by any Party shall be valid and effectual only if it is in writing under the hands of duly authorized representative of such Party in this behalf and not otherwise;
l. Any reference to any period commencing "from" a specified day or date and "till" or "until" a specified day or date shall include both such days or dates.

2. AGREEMENT

2.1 Term of Agreement

The term of this Agreement is 90 days (Ninety) days commencing from the Appointed Date and ending with the Expiry Date (hereinafter referred to as "the Agreement Period")..

2.2 Acceptance of Rights

In consideration of the BDA granting the rights as set out in clause 2.1 and other good and valuable consideration expressed herein, the Service Provider here by accepts and agrees and undertakes to perform/ discharge all its obligations in accordance with the provisions hereof.

2.3 Rights and Use of the Project Facilities

(a) The Service Provider should not subcontract the project.

(b) The Service Provider shall not part with or create any Encumbrance on the whole or any part of the Project Facilities save and except as set forth and permitted under this Agreement.

3. OBLIGATIONS OF THE SERVICE PROVIDER

3.1 Performance Security

a. the Service Provider before signing of this Agreement, for due and punctual performance of its obligations under this Agreement procured and furnished a revolving bank guarantee in the specified format, ("Performance Security") for an amount Rs.1,50,000 (Rupees One Lakh Fifty Thousand only), from a any scheduled Indian Bank.

b. The Performance Security shall be kept valid for a period of 15 days after the Expiry Date.

Provided that, if this Agreement is terminated due to any event other than the Service Provider Event of Default, the Performance Security, shall, subject to the BDA 's right to receive amounts, if any, from the Service Provider under this Agreement, be duly discharged and released to the Service Provider.

3.2 INSTALLATION PLAN

3.2.1 Preparation and Approval of Installation Plan

a. Service Provider shall, in consultation with the BDA, prepare and finalize a plan for installation of the Project ("Installation Plan")

i. Design Plan, specifications and quantity of components for installation of Project;

ii. Proposed time schedules for the implementation of the project installation of Project;

3.3 TIMELINES FOR TRIAL RUN AND INSTALLATION

The timelines for Trial Run and Installation is provided in Schedule 2. The Service Provider must, adhere to the timelines for installation as mentioned in Schedule 2.

Notwithstanding anything contained herein this clause, any delay in adhering to the Timelines due to reasons beyond the control of the Service Provider or reasons not solely attributable to the Service Provider, shall not be construed as default and the BDA shall provide extension of the timeline to the Service Provider to the extent as reasonable.

3.4 COMPLETION CERTIFICATE

The Service Provider must

a. Intimate the BDA / its Nominee within seven days from the date of completion of Implementation of the Project for issue of Completion Certificate by the BDA.

Provided, in case of the following event,

i. Failure of BDA's Nominee to be present during the inspection of Project within the stipulated time or

ii. Failure of BDA's Nominee to issue Completion Certificate, within the stipulated time, without assigning reasons comments for such failure, or

iii. Any dispute between the BDA's Nominee and the Service Provider in relation to the installation.

the Service Provider shall, collate the output of the Pilot and details of installation of Project ("the Service Provider Installation Statement") and submit the same to the BDA.

3.5 OTHER OBLIGATIONS

The Service Provider shall:

a. Service Provider should have adequate qualified and experienced personnel required for taking up the Project

b. Intimate to the BDA about the non-functioning, mal–functioning, errors in the Project.

c. Use only Java and MySql software with valid data security protection certificate/ products and provide access and proof of the same to the BDA;

d. Intimate to the BDA / Department's Nominee the names of Persons authorized by the Service Provider for implementing the Project and intimate any changes in the names of such Persons;

e. Make its own arrangements for all tools/equipment's/software necessary to comply design, development and implementation Requirements;

f. Be responsible for the safety of tools/ equipment/ software and other Project;

g. Make efforts to maintain harmony and good industrial relations among the personnel employed in connection with the performance of its obligations under

this Agreement and shall be solely responsible for compliance with all laws and solely be liable for all possible claims arising therefrom;

h. Not allow unauthorized persons (including unauthorized persons who are employees of the Parties) either to gain access to or interfere with Confidential Information and shall promptly inform the BDA in writing of any act or omission which it is aware that could have an adverse effect on the security and safety of the Project;

i. Not to disclose or use the Confidential Information to any such recipient and shall hereby undertake to use such Confidential Information only for the purposes of this Agreement or as otherwise expressly permitted or required by the Project;

j. Not, copy the Confidential Information or cause to allow it to be copied, directly or indirectly, in whole or in part, except as otherwise expressly provided in this Agreement or approved with the prior written consent of the BDA;

k. Comply with Applicable Laws governing the Project at all times during the period of the Agreement.

l. In case of Consortium, the lead member shall be solely responsible for the implementation of the project as per the agreement.

3.6 SUBMISSION OF STATUS REPORTS

The Service Provider shall submit periodical status report / progress report to the BDA comprising of the details and information sought by the BDA.

3.7 CONFIDENTIALITY OBLIGATIONS OF THE SERVICE PROVIDER

3.7.1 The contents of the status report shall be treated as confidential ("Confidential Information") by the Service Provider. The Confidential Information is to be used by the Service Provider, only for reporting it to the BDA and for no other purposes whatsoever.

3.8 NO BREACH OF OBLIGATIONS

The Service Provider shall not be considered to be in breach of its obligations under this Agreement nor shall it incur or suffer any liability if and to the extent performance of any of its obligations under this Agreement is affected by or on account of any of the following:

a. Force Majeure Event, subject to Clause11;

b. Failure of the BDA to perform any of its obligations;

c. Compliance with the instructions of the BDA other than instructions issued as a

consequence of a breach by the Service Provider of any of its obligations hereunder.

4. OBLIGATIONS OF THE BDA

4.1 Specific Obligations

In addition to and not in derogation or substitution of any of its other rights under this Agreement, the BDA shall have obligations set out in this Clause.

a. Review the functional requirements and non functional requirements provided by the service provider and sign off.

b. Conduct User Acceptance test of the developed software and provide timely feedback

c. Negotiate and contract a Payment Gateway provider to be integrated with the software to be developed

d. Negotiate and contract a SMS gateway provider to be integrated with the software to be developed

e. Negotiate and contract with Adhaar for integration with the software to be developed.

f. Provide hosting environment for the Software to be hosted

4.2 GENERAL OBLIGATIONS

The BDA shall:

a. Provide necessary assistance to the Service Provider for securing Applicable Permits;

b. Designate such officers as may be necessary for liaison with the Service Provider; and

c. Provide necessary assistance to the Service Provider as may be necessary for carrying out its obligations under this Agreement.

5. CHANGE OF SCOPE

5.1 Change of Scope

During the period of the Agreement, the BDA may, notwithstanding anything to the contrary contained in this Agreement, requires the Service Provider to provide additional work/ upgradation / enhancement of scope / with technological changes / which are not included in the scope of work as contemplated by this Agreement ("Change of Scope"). Any additional cost

incurred due to such Change of Scope/ upgradation / enhancement of scope / with technological changes shall be compensated by BDA to the Service Provider.

6. OWNERSHIP AND EXIT MANAGEMENT PLAN

6.1 Ownership

Without prejudice and subject to the Agreement, the Project, including all up gradations / improvements made therein by the Service Provider belongs to BDA. The Source code of the application to be handed back to BDA at the beginning of the operational phase and during the exit management phase.

7. INTELLECTUAL PROPERTY

All the matter relating to intellectual rights shall be governed and dealt with as per the terms and conditions of this Agreement.

7.1 the Service Provider shall indemnify, defend and hold harmless the BDA , from and against any and all losses arising from claims by third parties that any equipment, software, information, methods of operation or other intellectual property (or the access, use or other rights thereto) provided by the Service Provider pursuant to this Agreement, infringes a copyright enforceable in India, infringes a patent issued in India or constitute misappropriation or unlawful disclosure or use of another Party's trade secret under the laws of India.

7.2 The BDA shall have no liability or obligation to the Service Provider or any other Person for claims, if any, is based upon any use of the equipment, software, information, methods of operation or other intellectual property (or the access, use or other rights thereto) for the benefit of any Person (or the access, use or other rights thereto) for the benefit of any Person (including any use by the Service Provider or its nominees outside the scope of this Agreement) other than for the Project.

7.3 All rights, title and interest in and to, and ownership in, proprietary information of the Project which is provided to the Service Provider, and all modifications, enhancements and other derivative works of such proprietary information, as a result of services rendered by the Service Provider hereunder shall remain solely with the BDA. The Service Provider shall be entitled to use such proprietary information only during the period of this Agreement and only for the purposes of providing the services or to the extent necessary for the Service Provider's normal operational, repair and maintenance purposes related to the service.

8. FORCE MAJEURE

8.1 Force Majeure Event

If the Agreement is frustrated by any event entirely outside the control of the Parties (Affected Party) shall constitute Force Majeure Event, the BDA shall certify that the Agreement has been frustrated due to supervening impossibility. Service Provider shall make the Project Facilities safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which commitment was made.

"Force Majeure Event" includes any event due to any cause beyond the reasonable control of the Party, including, without limitation, unavailability of any communication system, sabotage, fire, flood, explosion, acts of God, civil commotion, strikes or industrial action of any kind, riots, insurrection, war or acts of government etc.

8.2 Notice of Force Majeure Event

a) As soon as practicable and in any case within 7 (seven) days of the date of occurrence if a Force Majeure Event or the date of knowledge thereof, the Affected Party shall notify the BDA the following in reasonable detail:

   i. The nature and extent of the Force Majeure Event;

   ii. The estimated Force Majeure Period;

   iii. The nature of and the extent to which, performance of any of its obligations under this Agreement is affected by the Force Majeure Event;

   iv. The measures which the Affected Party has taken or proposed to take to alleviate / mitigate the impact of the Force Majeure Event and to resume performance of such of its obligations affected thereby; and

   v. Any other relevant information concerning the Force Majeure Event, and / or the rights and obligations of the Parties under this Agreement.

b) As soon as practicable and in any case within 5 (five) days of notification by the Affected Party in accordance with the preceding clause (a), the Parties shall meet and hold discussions in good faith and where necessary conduct physical inspection/ survey of the Project Facilities in order to:

   i. Assess the impact of the underlying Force Majeure Event,

   ii. To determine the likely duration of Force Majeure Period and

iii. To formulate damage mitigation measures and steps to be undertaken by the Parties for resumption of obligations, the performance of which shall have been affected by the underlying Force Majeure Event.

c) If the Parties are rendered unable to perform any of their obligations under this Agreement because of a Force Majeure Event, save and except as expressly provided in the Agreement, neither Party hereto shall be liable in any manner whatsoever to the other Party arising out of occurrence or existence of any Force Majeure Event.

9. DISPUTE RESOLUTION

9.1 Any dispute, difference or controversy of whatever nature howsoever arising under or out of or in relation to this Agreement (including its interpretation) between the Parties, and so notified in writing by either Party to the other Party (the "**Dispute**") shall, in the first instance, be attempted to be resolved amicably in accordance with the conciliation procedure set forth in Clause 13.3.

9.2 The Parties agree to use their best efforts for resolving all Disputes arising under or in respect of this Agreement promptly, equitably and in good faith, and further agree to provide each other with reasonable access during normal business hours to all non-privileged records, information and data pertaining to any Dispute.

9.3 **Conciliation**

In the event of any unresolved Dispute between the Parties, either Party may call upon the Chairman, Bangalore Development Authority and the Chairman of the Board of Directors of the Service Provider or a substitute thereof for amicable settlement, and upon such reference, the said persons shall meet no later than 10 (ten) days from the date of reference to discuss and attempt to amicably resolve the Dispute. If such meeting does not take place within the 10 (ten) day period or the Dispute is not amicably settled within 15 (fifteen) days of the meeting or the Dispute is not resolved as evidenced by the signing of written terms of settlement within 30 (thirty) days of the notice in writing referred to in Clause 13.1 or such longer period as may be mutually agreed by the Parties, either Party may refer the Dispute to arbitration in accordance with the provisions of Clause 13.4.

9.4 **Arbitration**

9.4.1 Any Dispute which is not resolved amicably by conciliation, as provided in Clause 13.3, shall be finally decided by reference to arbitration by an Arbitral Tribunal appointed in accordance with Clause 13.2. Such arbitration shall be held in accordance with the Rules of Arbitration of the International Centre for Alternative Dispute Resolution, New Delhi (the "**Rules**"), or such other rules as may be mutually agreed

by the Parties, and shall be subject to the provisions of the Arbitration and Conciliation Act, 1996. The venue of such arbitration shall be Bengaluru and the language of arbitration proceedings shall be English.

9.4.2 There shall be a sole arbitrator whose appointment shall be made in accordance with the Rules.

9.4.3 The arbitrators shall make a reasoned award (the "**Award**"). Any Award made in any arbitration held pursuant to this Clause 9 shall be final and binding on the Parties as from the date it is made, and the Service Provider and the BDA agree and undertake to carry out such Award without delay.

9.4.4 The Service Provider and the BDA agree that an Award may be enforced against the Service Provider and/or the BDA, as the case may be, and their respective assets wherever situated.

9.4.5 This Agreement and the rights and obligations of the Parties shall remain in full force and effect, pending the Award in any arbitration proceedings hereunder.

10. REPRESENTATIONS AND WARRANTIES

10.1 Representations and Warranties of the Service Provider

The Service Provider hereby represents and warrants to the BDA that:

a) It is duly organized, validly existing and in good standing under the laws of India;

b) It has full power and BDA to execute, deliver and perform its obligations under this Agreement and to carry out the transactions contemplated hereby;

c) It has the financial standing and capacity to undertake the Project;

d) This Agreement constitutes its legal, valid and binding obligation enforceable against it in accordance with the terms hereof;

e) It is subject to civil and commercial laws of India with respect to this Agreement and it hereby expressly and irrevocably waives any immunity in any jurisdiction in respect thereof;

f) The execution, delivery and performance of this Agreement will not conflict with, result in the breach of, constitute a default under or accelerate performance required by any of the terms of any Applicable Laws or any covenant, agreement, understanding, decree or order to which it is a party or by which it or any of its properties or assets are bound or affected;

g) It has no knowledge of any violation or default with respect to any order, writ,

injunction or any decree of any court or any legally binding order of any government body which may result in Material Adverse Effect;

h) It has complied with all Applicable Laws and has not been subject to any fines, penalties, injunctive relief or any other civil or criminal liabilities which in the aggregate have or may have Material Adverse Effect;

i) No representation or warranty by the Service Provider contained herein or in any other document furnished by it to the BDA in relation to Applicable Permits contains or will contain any untrue statement of material fact or omits or will omit to state a material fact necessary to make such representation or warranty not misleading.

j) No bribe or illegal gratification has been paid or will be paid in cash or kind by or on behalf of the Service Provider to any Person to procure this Agreement.

k) Without prejudice to any express provision contained in this Agreement, the Service Provider acknowledges that prior to the execution of this Agreement, the Service Provider has after a complete and careful examination made an independent evaluation of the Project, and the information provided by to it as part of the proposal documents or otherwise, and has determined to its satisfaction the nature and extent of risks and hazards as are likely to arise or may be faced by the Service Provider in the course of performance of its obligations hereunder; and

l) The Service Provider also acknowledges and hereby accepts the risk of inadequacy, mistake or error in or relating to any of the matters set forth above and hereby confirms that the BDA shall not be liable for the same in any manner whatsoever to the Service Provider.

10.2 Representations and Warranties of BDA

The BDA hereby represents and warrants to the Service Provider that:

a) The BDA have full power and BDA to enter into this Agreement and perform / disclose their obligations contained herein;

b) The BDA have taken all necessary action to authorize the execution, delivery and performance of this Agreement;

c) This Agreement constitutes of the BDA legal, valid and binding obligation enforceable in accordance with the terms hereof;

d) The BDA hereby waives its sovereign immunity and this Agreement has been entered into by the BDA in its commercial capacity;

15 MISCELLANEOUS

15.1 Assignment and Charges

a) Subject to clauses (b) and (c) herein below, no Party shall assign this Agreement or the rights, benefits and obligations hereunder, save and except with prior consent of the other Party.

b) Except as provided in clause (c) herein below the Service Provider shall not create nor permit to subsist any Encumbrance over or otherwise transfer or dispose of all or any of its rights and benefits under this Agreement except with prior consent in writing of the BDA, which consent the BDA shall be entitled to decline without assigning any reason whatsoever.

c) Restraint set forth in clauses (a) and (b) above shall not apply to:

i) liens / Encumbrances arising by operation of law (or by an agreement evidencing the same) in the ordinary course of business of the Service Provider

ii) mortgages / pledges / hypothecation of the Computer Systems, as security for indebtedness, in favor of the Lenders and working capital providers for the Project;

iii) Project of the Service Provider's rights and benefits under this Agreement to or in favour of the Lenders as security for financial assistance provided by them.

15.2 General Liability and Indemnity

a) the Service Provider shall indemnify, defend and hold the BDA harmless against any and all proceedings, actions and third-party claims arising out of a breach by the Service Provider of any of its obligations under this Agreement, except to the extent that any such claim has arisen due to breach by the BDA of any of its obligations under this Agreement or a Force Majeure Event which is a Political Event.

b) Notwithstanding the other provisions of this Agreement, to the maximum extent permitted by applicable law, in no event and under no legal theory shall either Party be liable to the other party for any indirect, special, incidental or consequential damages arising out of this Agreement including but not limited to personal injury, loss of data, loss of profit, production, anticipated savings , damages for loss of goodwill, business interruption or any type of indirect, economic or consequential loss even if that loss or damage was reasonably foreseeable or that party was aware of the possibility of that loss or damage arising.

c) The Total liability of the Service Provider under indemnification shall be limited to 10% of total project value.

15.3 Governing Law and Jurisdiction

This Agreement shall be governed by the laws of India. The Courts at Bengaluru, Karnataka shall have jurisdiction over all matters arising out of or relating to this Agreement.

15.4 Waiver

a) Waiver by either Party of any default by the other Party in the observance and performance of any provision of or obligations under this Agreement:

i) shall not operate or be construed as a waiver of any other or subsequent default hereof or of other provisions or obligations under this Agreement;

ii) shall not be effective unless it is in writing and executed by a duly authorized representative of such Party; and

iii) shall not affect the validity or enforceability of this Agreement in any manner.

b) Neither the failure by a Party to insist on any occasion upon the performance of the terms, conditions and provisions of this Agreement or any obligation hereunder nor time or other indulgence granted by a Party to any other Party shall be treated or deemed as waiver / breach of any terms, conditions or provisions of this Agreement.

15.5 Survival

Termination of this Agreement

a) shall not relieve the Service Provider of any obligations already incurred hereunder which expressly or by implication survives Termination hereof, and

b) except as otherwise provided in any provision of this Agreement expressly limiting the liability of Service Provider, shall not relieve Service Provider of any obligations or liabilities for loss or damage to the BDA arising out of or caused by acts or omissions of by Service provider prior to the effectiveness of such Termination or arising out of such Termination.

15.6 Amendments

This Agreement and the Schedules together constitute a complete and exclusive understanding of the terms of the Agreement between the Parties on the subject hereof and no amendment or modification hereto shall be valid and effective unless agreed to by all the Parties hereto and evidenced in writing.

15.7 Notices

Unless otherwise stated, notices to be given under this Agreement including but

not limited to a notice of waiver of any term, breach of any term of this Agreement and termination of this Agreement, shall be in writing (English language) and shall be given by hand delivery, recognized international courier, mail, telex or facsimile transmission and delivered or transmitted to the Parties at their respective addresses set forth below:

If to BDA:

If to the Service Provider:

Or such address, telex number, or facsimile number as may be duly notified by the respective Parties from time to time, and shall be deemed to have been made or delivered (i) in the case of any communication made by letter, when delivered by hand, by recognized international courier or by mail (registered, return receipt requested) at that address and (ii) in the case of any communication made by telex or facsimile, when transmitted properly addressed to such telex number.

15.8 Severability:

If for any reason whatsoever any provision of this Agreement is or becomes invalid, illegal or unenforceable or is declared by any court of competent jurisdiction or any other instrumentality to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions shall not have affected in any manner, and the Parties shall negotiate in good faith with a view to agreeing upon one or more provisions which may be substituted for such invalid, unenforceable or illegal provisions, as nearly as is practicable. Provided failure to agree upon any such provisions shall not be subject to dispute resolution under this Agreement or otherwise.

15.9 No Partnership

Nothing contained in this Agreement shall be construed or interpreted as constituting a partnership between the Parties. Neither Party shall have any BDA to bind the other in any manner whatsoever.

15.10 Language

All notices required to be given under this Agreement and all communications, documentation and proceedings which are in any way relevant to this Agreement shall be in writing and in English language.

15.11 Exclusion of Implied Warranties etc.

This Agreement expressly excludes any warranty, condition or other undertaking implied at law or by custom or otherwise arising out of any other agreement between

the Parties or any representation by any Party not contained in a binding legal agreement executed by the Parties.

15.12 Counterparts

This Agreement may be executed in two counterparts, each of which when executed and delivered shall constitute an original of this Agreement but shall together constitute one and only the Agreement.

IN WITNESS WHEREOF THE, PARTIES HAVE EXECUTED AND DELIVERED THIS AGREEMENT AS OF THE DATE FIRST ABOVE WRITTEN.

SIGNED SEALED AND DELIVERED
For and on behalf of the BDA by

(Signature)

(Name)

(Designation)

SIGNED SEALED AND DELIVERED

For and on behalf of the Service Provider by

(Signature)

(Name)

(Designation)

Witnesses

1)

2)